

## **Guidelines for Preparing the Project Report for the New Jersey State Revolving Fund**

### **Introduction:**

In applying for financial assistance from the New Jersey State Revolving Fund Program, the applicant must submit a project report to support the engineering requirements and the environmental/cultural resource review process as required by the Environmental Assessment Requirements for State Assisted Environmental Infrastructure Facilities. A complete project report includes the completion of:

- Engineering Requirements (N.J.A.C. 7:22-3.11(d)5, 3.35)
- Environmental Assessment (N.J.A.C. 7:22-10.4, 10.5, or 10.6)
- Cultural Resource Assessment (N.J.A.C. 7:22-10.8)

Each section of the specific regulations is attached and is to be used as a guideline for preparing the project report.

### **Engineering Requirements:**

For all environmental infrastructure facilities, a project report must include all requirements in accordance with N.J.A.C. 7:22-3 including environmental/cultural resource requirements. The engineering requirements are attached.

### **Environmental Assessment:**

The level of environmental review will be based upon a description of the of the proposed project, the environmental infrastructure needs, the environmental infrastructure alternatives to be considered, and an appraisal of potential beneficial and adverse environmental and cultural resource impacts of the alternatives.

#### **Level 1 Environmental Review**

Where a Level I Environmental Review has been determined to be appropriate in accordance with the eligibility criteria pursuant to N.J.A.C. 7:22-10.4, a Level 1 environmental planning document must be submitted by the project sponsor to the Department for review. The Level 1 Environmental planning document must be of sufficient scope to permit the Department to verify the preliminary determination to proceed with this level of review. Information to be provided in the environmental planning document includes the items contained in the attached Level 1 Environmental Review Requirements. This document must be public noticed within two weeks of its issuance.

#### **Level 2 Environmental Review**

If a project does not qualify for a Level 1 environmental review pursuant to N.J.A.C. 7:22-10.4, a Level 2 review is required. **A public hearing will be required** and proof of same must be included as part of a complete planning document submittal to the Department. Information to be provided in the environmental planning document includes the items contained in the attached Level 2 Environmental Review Requirements. The public hearing must be advertised at least 30 days in advance of the public hearing. The public notice must be submitted and approved by the Bureau of Environmental and Engineering Reviews prior to being published.

If a project does not qualify for a Level 1 or Level 2 environmental review pursuant to N.J.A.C. 7:22-10.4, or 10.5, a Level 3 environmental review may be required in accordance with N.J.A.C. 7:22-10.6. However, please note that Level 3 environmental reviews would only be required under exceptional circumstances.

### **Cultural Resource Requirements:**

Whether a project will require a cultural resources survey depends on two main factors: its potential to yield significant archaeological or above-ground resources from the historic or prehistoric eras, and the degree to which resources have been disturbed (by either natural or human forces). The Department will determine if a survey is needed based on submission by the applicant of the following:

1. A USGS 7.5 minute quad sheet (or other map of adequate scale to enable the Department to locate the project area on a USGS quad sheet) with all project locations (boundaries and/or point locations, as appropriate) clearly marked; and
2. A concise description of all facilities to be built or rehabilitated, specifying in particular the depths and widths of any excavations, and the age and function of any buildings or facilities to be demolished or abandoned.

### **Planning Submittal Procedure:**

- Use the attached regulations as a guide to complete a project report comprised of the engineering and the environmental/cultural resource requirements.
- Submit **3** copies of the completed project report to:

Mail Code 401-03D  
Department of Environmental Protection  
Division of Water Quality  
Municipal Finance and Construction Element  
Environmental Review Section  
P.O. Box 420  
Mail Code 401-03D  
Trenton, New Jersey 08625-0420  
**FAX: (609) 633-8165**  
**PHONE: (609) 633-1170**

**Engineering Requirements**  
**N.J.A.C. 7:22-3.11(d)5, 3.35**

**A complete Project Report/Facilities Plan must include:**

- i. **For all environmental infrastructure facilities**, the following items must be submitted:
  - (1) A description of both the proposed environmental infrastructure facilities and the complete environmental infrastructure system of which it is a part;
  - (2) Cost information on total capital costs of the project, and annual operation and maintenance costs;
  - (3) A description of the potential open space and recreation opportunities associated with the project;
  - (4) Appropriate documentation demonstrating compliance with the Environmental Assessment Requirements for State Assisted Environmental Infrastructure Facilities (N.J.A.C. 7:22-10); and
  - (5) For the selected alternative, a concise description, at an appropriate level of detail, of at least the following:
    - (A) Relevant design parameters, including a description of the environmental infrastructure facilities to be built, schematic flow diagrams, hydraulic profiles and preliminary design criteria;
    - (B) Cost impacts on system users; and
    - (C) Institutional and management arrangements necessary for successful implementation, such as service agreements, local ordinances, interagency agreements or intermunicipal agreements.
- ii. **For wastewater treatment and stormwater management facilities**, a statement of consistency with the appropriate Water Quality Management Plans in accordance with the provisions of N.J.A.C. 7:15. For wastewater treatment facilities, a description of the Best Practicable Wastewater Treatment Technology or, for stormwater management facilities, a description of the Best Management Practices that will be utilized;
- iii. **For wastewater treatment, water supply and stormwater management facilities permitted as a municipal separate storm sewer system**, a cost effectiveness analysis of the feasible conventional, innovative and alternative technologies capable of meeting the applicable effluent, water quality, or drinking water standards and public health requirements over the design life of the facility while recognizing environmental and other nonmonetary considerations. The planning period for cost effectiveness analysis must be 20 years. The monetary costs to be considered must include the present worth or equivalent annual value of all capital costs and operation and maintenance costs. The population forecasting in the analysis must be consistent with the appropriate Water Quality Management Plan, the New Jersey Statewide Water Supply Plan or current census data. A cost effectiveness analysis must include:

(1) **For wastewater treatment facilities**, an evaluation of flow reduction methods. If the applicant demonstrates that the existing average daily base flow (ADBFB) from the area is less than 70 gallons per capita per day (gpcd), or if the Department determines the area has an effective existing flow reduction program, this evaluation is not required;

(2) A description of the relationship between the capacity of alternatives analyzed and the needs to be served, including capacity for future growth expected after the environmental infrastructure facilities become operational. This includes letters of intent from significant industrial or commercial users and all establishments intending to increase their wastewater flows or water supply demand or relocate in the area documenting capacity needs and characteristics for existing or projected wastewater flows or water supply demand;

(3) An evaluation of improved effluent or drinking water quality attainable by upgrading the operation and maintenance and efficiency of existing facilities as an alternative or supplement to construction of new facilities;

(4) An evaluation of the alternative methods for the reuse or ultimate disposal of treated wastewater and sludge material resulting from the treatment process;

(5) A consideration of systems with revenue generating applications;

(6) An evaluation of opportunities to reduce use of or recover energy; and

(7) Cost information on total capital costs, and annual operation and maintenance costs, as well as estimated annual or monthly costs to residential, commercial and industrial users;

iv. **For wastewater treatment facilities**, an infiltration/inflow analysis of the sewer system in accordance with N.J.A.C. 7:22-3.35, or **for water supply facilities**, an analysis of the amount of water withdrawn at the source(s) and not accounted for as being delivered to customers in measured amounts;

v. **For land acquisition and conservation projects**, the following items must also be submitted:

(1) An evaluation of the land to be acquired, including the water quality basis for the proposed land acquisition that addresses the existing land use patterns, potential threats to water quality, and other existing problems;

(2) A site survey signed and sealed by a land surveyor licensed to practice in the State of New Jersey and the criteria used to select the parcel(s) for acquisition;

(3) The appraisal(s) of the parcel(s). For a parcel with an estimated land value of less than \$250,000, the local government unit shall obtain at least one appraisal. For a parcel with an estimated land value of \$250,000 or more, two appraisals shall be obtained. For easement acquisitions, appraisals shall be submitted that identify the fair market value of the parcel with and without the conservation restriction. Any appraisals required herein shall be prepared by a real estate appraiser licensed by the state's Division of Consumer Affairs to perform such appraisals;

(4) If a preliminary assessment report or site assessment prepared under the Technical Requirements for Site Remediation, N.J.A.C. 7:26E identifies potential contamination of the land to be acquired, a letter of no further action issued by the Department under N.J.A.C. 7:26C-2.6 is also required; and

(5) A statement from the local government unit pledging to comply with the loan conditions identified in N.J.A.C. 7:22-3.17(a)33 and identifying the actions the local government unit will take to ensure that the applicable restrictions will be incorporated in the deed for the parcel(s) and will apply in perpetuity.

vi. **For landfill closure facilities**, a copy of the Department's approval of the sanitary landfill's Closure and Post-Closure Plan submitted pursuant to N.J.A.C. 7:26-2A;

vii. **For new landfill facilities**, a copy of the applicable solid waste facility permit issued pursuant to N.J.A.C. 7:26-2.

viii. **For remedial action activities**, the following items must also be submitted:

(1) A statement by the applicant whether or not the applicant is currently conducting remediation pursuant to the ISRA or the Underground Storage Tank programs or otherwise conducting a remediation pursuant to an oversight document, including, as applicable, case number, Known Contaminated Site List number and the name of the Department case manager for the case; and

(2) A copy of the applicable Department approvals issued pursuant to N.J.A.C. 7:26E-6.1(b)1 that identifies remedial actions proposed to be implemented at a contaminated site.

ix. **For well sealing projects**, a description of the project area, the well(s) proposed to be sealed and a certification that the method proposed to be used to seal the well(s) complies with N.J.A.C. 7:9-9.

### **7:22-3.35 Infiltration/inflow for wastewater treatment facilities**

(a) An infiltration/inflow analysis is required for sanitary sewer rehabilitation projects as part of the Project Report/Facilities Plan.

(b) The applicant shall demonstrate to the Department's satisfaction that each sewer system discharging into the wastewater treatment facility is not or will not be subject to excessive infiltration/inflow. For combined sewer overflow projects, in no case shall inflow be considered excessive.

**Environmental Assessment  
Level 1 Environmental review  
N.J.A.C. 7:22-10.4**

**7:22-10.4 Level 1 environmental review**

(a) Projects qualifying for this level of environmental review may include the following categories of projects:

1. Rehabilitation, repair or replacement of existing environmental infrastructure facilities, including land acquisition and conservation;
2. Construction of ancillary facilities or minor improvements to environmental infrastructure facilities which do not create a new discharge, reduce the level of treatment, or result in an increase in quantity of flow of an existing discharge.

(b) Projects which conform to one of the categories identified in (a) above but which have any of the following characteristics shall not qualify for a Level 1 environmental review:

1. The project can be expected to have a permanent adverse or a significant temporary adverse effect on the human environment;
2. The project can be expected to have a permanent adverse or a significant temporary adverse direct or indirect impact on cultural resources, endangered or threatened species or designated habitats, wetlands, floodplains, important farmlands or other environmentally critical areas;
3. For wastewater treatment or water supply projects, the user cost for the project significantly exceeds 1.75 percent of the median annual household income, as determined and modified according to N.J.A.C. 7:22-10.5(b)11; or
4. The project is expected to result in significant adverse public comment.

**(c) Where a Level 1 review has been determined to be appropriate, a Level 1 environmental planning document must be submitted by the project sponsor to the Department for review. The Level 1 environmental planning document must be of sufficient scope to permit the Department to verify the preliminary determination to proceed with this level of review. Information to be provided in the environmental planning document includes the following, as applicable:**

**1. A brief description of the need for the proposed activity, the nature and location of any structures to be built, and a map of the service area of the affected environmental infrastructure facilities;**

**2. A suitable 8½ inch by 11 inch map of the planning area which depicts the location of the proposed activity. An 8½ by 11 inch site plan showing areas of proposed construction should also be included where appropriate to the type of project proposed;**

**3. A narrative describing the extent of beneficial and adverse impact on environmental or cultural resource features that can be expected as a result of implementing the proposed project and basis for concluding that the proposed project qualifies for a Level 1 environmental review in accordance with (a) and (b) above. Cultural resource impacts must be determined in accordance with N.J.A.C. 7:22-10.8;**

**4. A summary of alternatives available, including, at a minimum, the no action alternative, and the basis for selecting the proposed action. For wastewater treatment, water supply and stormwater management facilities permitted as a municipal separate storm sewer system, the selected plan must be the most cost effective, environmentally sound alternative which will address the water quality or water supply need which has been identified and which is implementable (for other environmental infrastructure facilities, the provisions with respect to cost effectiveness are not applicable). The most cost effective alternative is determined by taking into account the cost of environmental impacts and the cost of construction. The basis discussion must include the project costs, user costs, environmental impacts and effectiveness of the proposed alternatives relative to addressing the identified water quality or water supply need as compared with other alternatives considered; and**

**5. A summary of the involvement of the public in the development and selection of the proposed project.**

(d) The Department will review the environmental planning document submitted by the project sponsor and will make one of the following determinations:

1. The Level 1 environmental planning document is complete, acceptable, and verifies the preliminary determination to proceed with this level of environmental review. In this case, the Department will prepare and issue a Level 1 decision statement as set forth in (e) below which will be sent to a project mailing list developed in accordance with N.J.A.C. 7:22-10.10(c). The project sponsor shall publish a notice in a newspaper of general circulation in the planning area within two weeks of the date of the Department's decision statement. The notice must describe the proposed action, indicate the decision by the Department to approve the project, and advise the public that the project sponsor shall, upon written request, make available for public review both the planning documents and the Department's decision statement. Upon issuance of the decision statement, planning is approved and the Department may proceed with award of financial assistance, subject to the provisions of (f) below, and provided the other requirements of the program have been met as specified in the applicable program rules.

2. Additional information is required to make a final determination. In this case, the Department will notify the project sponsor in writing of the deficiencies and the project sponsor shall be responsible to correct the deficiencies. The Department may establish a time frame for response which, if not met, could result in a bypass of the proposed project in the applicable funding cycle.

3. A Level 1 environmental review is not appropriate. In this case, the Department will notify the project sponsor of this determination and will identify whether the project is elevated to a Level 2 or Level 3 environmental review.

(e) A Level 1 environmental decision statement will include a description of the proposed project, a summary of the need for the proposed project, alternatives considered, environmental, cultural resource and social impacts of the proposed project, costs, mitigating measures, public input, and the basis for the determination that the proposed project qualifies for a Level 1 environmental decision statement.

(f) If, at any time up until the initiation of construction, additional information becomes available, the project is modified or conditions change, such that the project would not qualify for a

Level 1 environmental review, the Department will require the project sponsor to proceed with a Level 2 or Level 3 review, whichever is determined appropriate by the Department.

**Environmental Assessment  
Level 2 Environmental Review  
N.J.A.C. 7:22-10.5**

**7:22-10.5 Level 2 environmental review**

(a) If a project does not qualify for a Level 1 environmental review, but the Department determines that a Level 3 environmental review is not warranted, then a Level 2 environmental review is required.

**(b) For a Level 2 review, environmental planning documentation must be submitted by the project sponsor consisting of an environmental information document, results of investigations and consultations conducted pursuant to N.J.A.C. 7:22-10.8 and 10.9 and results of public participation conducted pursuant to N.J.A.C. 7:22-10.10. At a minimum, a public hearing will be required and proof of same must be included as part of a complete planning document submittal to the Department. The environmental information document must include, where applicable, the following information.**

1. A geographical description of the planning area;
2. A clear map of the planning area. The scale of the map should generally be one inch equal to 2000 feet. However, where the size of the planning area is inappropriate to this scale, a larger or smaller scale map may be required by the Department;
3. A description of and mapping, where applicable, of existing environmental conditions and features including:
  - i. Existing water quality and uses including a comparison to New Jersey water quality standards and uses established in accordance with N.J.A.C. 7:9-4, 5 or 6;
  - ii. Hydrologic characteristics;
  - iii. Water supply source, current demand and current reliable supply. Identify any designated sole source aquifer or critical water supply areas located in the planning area, if applicable;
  - iv. Geology, topography and soils types and limitations with respect to the use of on-site systems or land application of effluent or residuals. Soil information shall be taken from the Soil Conservation Service county soils maps and interpretations unless more accurate field evaluation of the specific project area is available;
  - v. Regional air quality and comparison to New Jersey Air Quality Standards established pursuant to N.J.S.A. 26:2C-1 et seq. Address conformance with the State Implementation Plan for air quality (prepared pursuant to the Federal Clean Air Act, 42 U.S.C. §§7401 et seq.);



vi. A general description of plant and animal communities existing in the planning area and a map of habitat types in the project's direct impact area;

vii. Existing land use and zoned use permitted for undeveloped areas in the planning area;

viii. Environmentally critical areas within the planning area, including, but not limited to, wetlands, floodplains, important farmlands, Agricultural Development Areas, important aquifer recharge areas, coastal areas, stream corridors, parks and preserves, steep slopes, and locations of endangered or threatened species or designated habitats; and

ix. Areas subject to the jurisdiction of the Pinelands Commission, Coastal Area Facility Review Act, or the Hackensack Meadowlands Development Commission.

4. The purpose and need for the project in terms of surface water or groundwater pollution or depletion, drinking water quality or public health problems to be addressed by the project;

5. A description of the future environment without the proposed project (that is, no action);

6. A description and map of existing environmental infrastructure facilities, their service areas and population served; the design and permitted capacity; treatment type and level; current wastewater or stormwater flow or water supply demand by type (residential, commercial, industrial) and, for wastewater treatment facilities, infiltration and inflow.

7. For wastewater treatment and water supply projects, where new or expanded facilities are involved in the scope of the project, an environmental constraints analysis prepared according to the following procedure:

i. Overlay mapping of environmentally constrained areas, which include wetlands, floodplains, endangered species sites or designated habitats, parks and preserves, and Agricultural Development Areas, in the planning area with mapping of existing land use and permitted zoning for currently undeveloped areas. Areas not yet developed which are not environmentally constrained are considered developable. Environmentally constrained, developed, and developable areas shall be clearly depicted on the mapping to be submitted.

ii. Identify existing population and current wastewater flow or water supply demand by source. Determine the extent of development which could occur according to permitted zoning in developable areas. This should be represented as a number of dwelling units and population for residential areas and area coverage for commercial and industrial areas. Information regarding existing wastewater flows and flow projections must be calculated in accordance with N.J.A.C. 7:14A-23.3 and 7:15-5.18. Current and projected water supply demand shall be calculated in accordance with N.J.A.C. 7:10-11 or 7:10-12, as applicable. These figures must be presented in a table and used in calculating the maximum wastewater flow or water supply demand projections that may be considered in planning environmental infrastructure facilities. All assumptions used in calculating wastewater flow or water supply demand from units and coverage must be explained.

8. A description of alternatives considered, including the no action alternative;

9. A cost comparison of alternatives, including capital costs, operation and maintenance costs, user cost and total project cost on a present worth basis;

10. A description of the environmental impacts for each alternative including beneficial and adverse direct, indirect (or secondary impacts) and cumulative effects with other projects. Include an assessment of such impacts associated with each alternative on the following:

i. Surface water and groundwater quality and quantity and hydrology (including new or increased depletive uses of water resources and, where new development is projected, increased nonpoint source pollution);

ii. Plant and animal communities or other natural resources. Quantify by type the extent of such resources anticipated to be disturbed as a result of project construction;

- iii. Environmentally critical areas, as identified in (b)3viii above. Quantify by type the extent of such resources anticipated to be disturbed as a result of project construction;
- iv. Air quality, especially with respect to consistency with the New Jersey State Implementation Plan prepared pursuant to the Federal Clean Air Act, 42 U.S.C. §§7401 et seq., and the New Jersey Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq.;
- v. Social and economic factors including, but not limited to, dust, noise, odors, nuisances, traffic or hazards; and
- vi. Where significant increases in wastewater treatment or water supply capacity will be provided, effects of induced growth on the environment and social infrastructure.

11. A description of the selected plan. For wastewater treatment, water supply and stormwater management facilities permitted as a municipal separate storm sewer system, the selected plan must be the most cost effective, environmentally sound alternative which addresses the identified water quality or water supply need and which is implementable (for other environmental infrastructure facilities, the provisions with respect to cost effectiveness are not applicable). Include, where applicable, the following:

- i. Environmental infrastructure facility treatment processes, treatment level, design flow (as included in the NJPDES permit, water supply allocation or other permit and on an annual average basis), capacity of units, effluent quality, discharge or water supply withdrawal location and receiving water body or treatment system. Include a site plan of the construction area. Design wastewater flow or water supply demand shall be broken down into residential, commercial and industrial, and for wastewater treatment facilities, infiltration/inflow components;
- ii. A map of the location and service area of each environmental infrastructure facility. Unless otherwise directed by the Department, this map shall be at a scale of one inch equal to 2,000 feet. Include on the map the environmentally constrained areas and indicate that no environmental infrastructure services shall be provided to environmentally constrained areas, except where development requiring wastewater treatment or water supply services is specifically permitted by the Department;
- iii. For wastewater and water supply projects, location, size, and capacity of the collection, conveyance or transmission facilities. Unless otherwise directed by the Department, the location shall be mapped at a scale of one inch equal to 2,000 feet;
- iv. A summary of costs, including capital, operation and maintenance, present worth of total project cost and anticipated user cost;
- v. For wastewater and water supply projects, a comparison of user cost to the median annual household income in the planning area. The base income data source shall be the latest United States Census. Income data shall be updated to the present using the consumer price index or other equivalent means;
- vi. A summary of environmental impacts of the selected alternative, as discussed in (b)10 above;
- vii. Adverse impacts that cannot be avoided;
- viii. The relationship between short term uses of the environment and enhancement of long term benefit;
- ix. Irreversible and irretrievable commitments of resources to the project; and
- x. Mitigating measures to be incorporated during design, construction, and/or the life of the project.

12. A description of steps needed and time frame for implementation of the project;

13. The identity of the owner or operator of the proposed facilities;

14. A list of the permits needed to implement the project and the status of obtaining the applicable permits;

15. A summary of the results of the coordination with affected Federal, State, regional, or local agencies and the public, carried out in accordance with N.J.A.C. 7:22-10.9 and 10.10;

16. For wastewater treatment and stormwater management projects, identification and assessment of consistency of the proposed project with the areawide Water Quality Management Plan which would apply to the planning area, and an assessment of whether or not the proposed project would trigger preparation of a wastewater management plan or a water quality management plan amendment in accordance with N.J.A.C. 7:15; and

17. For water supply facilities, assessment of consistency of the proposed project with the recommendations of the New Jersey Statewide Water Supply Plan.

### **Cultural Resource Requirements N.J.A.C. 7:22-10.8**

**The Department will make a preliminary determination regarding the need for and scope of a cultural resource survey in accordance with N.J.A.C. 7:22-10.8. Factors that will affect this preliminary evaluation include:**

1. The type and extent of the activity under consideration, particularly the nature of the physical disturbance that may be associated with the proposed undertaking;

2. The environmental characteristics of the planning area; and

3. If known, the likelihood of cultural resource material being present in the planning area.

(b) The Department may determine during the preliminary evaluation that the proposed project will have no effect upon cultural resources. In such cases, no survey will be required and the project may proceed without further cultural resource consideration.

(c) If the Department determines that a cultural resource survey is required for the proposed project, then the Department shall direct the project sponsor to secure the services of a professional, qualified archaeologist to prepare the appropriate level of survey as directed by the Department.

(d) The project sponsor shall submit to the Department a scope of work for each level of cultural resource survey required, as directed by the Department in accordance with (c) above. The scope of work shall be prepared by a professional, qualified archaeologist. No cultural resource survey shall be initiated until the Department reviews and approves, in writing, the scope of work for the cultural resource survey.

(e) The levels of cultural resource survey are progressive and the Department may decide at the conclusion of any given level that adequate documentation has been presented for the Department to issue a determination of effect as defined in (i) below. The project sponsor shall not proceed with a subsequent survey level until directed to do so by the Department.

(f) The following are the levels of cultural resource survey that the Department may require:

1. The first level of investigation is the Stage IA Documentation Review and Strategy Development Survey which consists of the following:

i. A broad-based literature search that provides a concise but comprehensive discussion of the prehistoric and historic development of the planning area referencing all known sites;

ii. An analysis of the documentation obtained from the State Historic Preservation Officer, the State Archaeologist, State and local libraries and museums, historic and archaeological societies, universities, professional and avocational experts;

iii. An environmental and geological analysis of the planning area which, taken with the archaeological and historic documentation, will predict areas of varying potential for the presence of cultural resources;

iv. An initial field inspection of the planning area; and

v. Recommendations for additional surveys, such as the Site Recognition Survey described in (f)2 below, that may be required.

2. The next level of investigation is the Stage IB Site Recognition Survey which consists of the following:

i. Subsurface testing for the identification of previously undocumented archaeological sites. Subsurface tests, placed at intervals approved by the Department, must be of sufficient depth to sample all soil strata that may potentially contain evidence of past human activity;

ii. An explanation, clearly presented and justified, of the survey methodology employed;

iii. The identification of previously undocumented historic sites or structures which require further architectural consideration;

iv. A clear analysis and presentation of the results of the survey; and

v. Recommendations for further actions concerning the avoidance of identified cultural resources or additional surveys.

3. The next level of investigation, the Stage II Site Definition and Evaluation Survey, is required if the potential direct or indirect impacts of the proposed project cannot be reasonably avoided by project modification or when there is insufficient data (extent, depth, significance) about the resource to assess avoidance or preservation alternatives. The Department will determine the need for a Stage II survey based upon an evaluation of the Stage IB survey report in conjunction with planning documentation prepared by the project sponsor in support of the project. A Stage II Survey consists of the following:

i. An assessment of the resource's eligibility to be listed on the New Jersey Register of Historic Places and the National Register of Historic Places by applying the State Register Criteria in accordance with N.J.S.A. 13:1B-15.128 et seq. and the National Register Criteria of Eligibility (36 CFR Part 63) to properties identified within the planning area which have not been previously identified for National Register eligibility;

ii. An assessment of the probable impact the proposed project may have on Register-listed resources or resources eligible to be listed on the New Jersey Register of Historic Places or the National Register of Historic Places; and

iii. A proposal for mitigating measures that may be implemented should it be determined that avoidance of a Register-listed resource or a resource eligible to be listed on the New Jersey or National Registers of Historic Places is not feasible.

(g) Where a Stage II survey has been required, and the report approved by the Department, the Department will make one of the following determinations:

1. It is practicable to avoid potential impacts to Register-listed or eligible resources through project modification. In this case, the project sponsor shall be directed to make the appropriate project modifications.

2. It is not practicable to avoid potential impacts to a Register-listed or eligible resource. In this case, the Department will assess the need to obtain a determination of eligibility in accordance with (h) below.

(h) The Department will prepare documentation supporting a determination of eligibility in accordance with N.J.S.A. 13:1B-15.128 et seq. and 36 C.F.R. 800.4.

(i) After the satisfactory completion of the required cultural resource surveys, the Department, after consultation with the appropriate agencies, in accordance with N.J.S.A. 13:1B-15.128 et seq. and 36 C.F.R. Part 800, will issue one of the following determinations of effect:

1. No cultural resources affected: this determination will be issued when the proposed project will have no direct or indirect effect on cultural resources. No further cultural resources review will be required.

2. Cultural resources affected: if there will be an effect to cultural resources, the Department will determine the nature of the effect in accordance with State and Federal laws and regulations. An adverse effect is found when a project may alter, directly or indirectly, the characteristics of a cultural resource that qualify it for listing in the National or New Jersey Registers of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. The Department may propose a finding of No Adverse Effect, if the Criteria of Adverse Effect, at 36 CFR Part 800.5(a)(1), are not met, or the project is modified or conditioned to avoid adverse effects. If an adverse effect is found, the Department will consult with the State Historic Preservation Officer to resolve the adverse effect pursuant to 36 CFR Part 800.6.

(j) Where it is determined that an alternative to avoid an adverse effect is not feasible, measures to minimize the potential effects shall be developed by the Department in consultation with the appropriate State and Federal agencies, State Historic Preservation Officer and, as required, other interested parties. A mitigation plan outlining these measures shall be included in the memorandum of agreement signed by the consulting parties in accordance with the requirements of 36 C.F.R. Part 800. Mitigation shall be commensurate with the nature and the significance of the resource adversely affected by the project.

(k) All reports of cultural resource surveys shall be submitted for review by the Department. All cartographic and document reproduction contained in the report must be clear and legible. Reports must have original photographic plates or high quality offsets. Professional procedures and reports shall meet the criteria set forth in the U.S. Department of Interior's "Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines" (Federal Register, Vol. 48, No. 190; September 29, 1983) and the professional reporting and survey guidelines of the New Jersey Historic Preservation Office of the Department, once these guidelines are promulgated as rules (in accordance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq.), incorporated herein by reference. All reports must contain:

1. A table of contents, list of figures, maps and plates;
2. A concise description of the proposed project, both in terms of its potential for ground disturbance and possible direct, indirect and future effects on cultural resources;
3. A clear discussion of the objectives of the survey, the methodology employed to achieve these objectives and an interpretation of the survey results;
4. A list of all sources and authorities consulted;
5. A map of sufficient scale upon which all identified cultural resources as well as potential project impacts are plotted;
6. A United States Geological Survey 7.5 minute quadrangle map of the planning area upon which cultural resources and areas surveyed are noted;
7. A map of sufficient scale identifying and plotting the locations of all tests and excavation units as well as areas of potential impacts;
8. A bibliography of all publications and manuscripts consulted;

9. An inventory of all artifacts recovered and analyzed according to provenience;
10. Stratigraphic profile information for all test units; and
11. Resumes of the individuals responsible for the survey and the report preparation.

(1) All archaeological materials and records resulting from investigations required by this rule must be curated in accordance with the "Secretary of the Interior's Standards and Guidelines for archeology and Historic Preservation," 48 Fed. Reg. 44,716 (September 29, 1983), incorporated herein by reference.