

**APPENDIX A**

**AGENCY CORRESPONDENCE**

## **APPENDIX A**

### **AGENCY CORRESPONDENCE**

#### **NEW MEADOWLANDS STADIUM PROJECT FINAL ENVIRONMENTAL IMPACT STATEMENT**

1. Letter from U.S. Army Corps of Engineers, New York District, dated June 22, 2006.
2. Letter from NJDEP Division of Parks and Forestry, Office of Natural Lands Management National Heritage Program, dated July 21, 2006.
3. Letter from United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, dated July 24, 2006.
4. Letter from NJDEP Office of Brownfield Reuse, dated August 9, 2006.
5. Letter from US Department of the Interior, Fish and Wildlife Service, dated August 11, 2006.
6. Letter from NJDEP Office of Permit Coordination and Environmental Review, dated August 22, 2006.
7. Letter from State of New Jersey, Department of Transportation, dated December 20, 2006.
8. Letters from Federal Aviation Administration, dated January 3, 2007.
9. Letter from NJDEP Office of Permit Coordination and Environmental Review, dated January 9, 2007.
10. Letter from US Department of the Interior, Fish and Wildlife Service, dated January 19, 2007.



DEPARTMENT OF THE ARMY  
NEW YORK DISTRICT, CORPS OF ENGINEERS  
JACOB K. JAVITS FEDERAL BUILDING  
NEW YORK, N.Y. 10278-0090

REPLY TO  
ATTENTION OF:

Regulatory Branch

JUN 22 2006

Mr. Robert Ceberio  
Executive Director  
New Jersey Meadowlands Commission  
One DeKorte Park Plaza  
Lyndhurst, New Jersey 07071

Dear Mr. Ceberio:

The New York District of the U.S. Army Corps of Engineers has received a copy of your Public Notice regarding the Scoping Document for the proposed Meadowlands Stadium project to be constructed within the Sports and Exposition Authority's Meadowlands Sports Complex. To determine if any proposed activities associated with the project would take place within the jurisdiction of the U.S. Army Corps of Engineers, we ask that a detailed copy of the proposed Meadowlands Stadium design plans be submitted to our office for review.

The design plans can be sent to my attention, and should you have questions, please feel free to contact me at (917) 790-0412.

Sincerely,

A handwritten signature in black ink, appearing to read "James Cannon".

James Cannon  
Project Manager  
Western Permits Section

Cf. Mr. Gary Sondermeyer, NJDEP



State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE  
Governor

LISA P. JACKSON  
Commissioner

Division of Parks and Forestry  
Office of Natural Lands Management  
Natural Heritage Program  
P.O. Box 404  
Trenton, NJ 08625-0404  
Tel. #609-984-1339  
Fax. #609-984-1427

July 21, 2006

Sarah Krow  
Langan Engineering and Environmental Services, Inc.  
River Drive Center 1  
Elmwood Park, NJ 07407

Re: The New Meadowlands Stadium Project

Dear Ms. Krow:

Thank you for your data request regarding rare species information for the above referenced project site in East Rutherford Borough, Bergen County.

Searches of the Natural Heritage Database and the Landscape Project (Version 2) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Request for Data into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

Neither the Natural Heritage Database nor the Landscape Project has records for any rare wildlife species on the referenced site.

We have also checked the Natural Heritage Database and the Landscape Project habitat mapping for occurrences of any rare wildlife species or wildlife habitat within 1/4 mile of the referenced site. Please see the table below for species list and conservation status.

Species within 1/4 mile of referenced site.

| Common Name                                 | Scientific Name            | Federal Status | State Status | Grank | Srank   |
|---|----------------------------|----------------|--------------|-------|---------|
| colonial waterbird foraging habitat         |                            |                |              |       |         |
| northern harrier                            | <i>Circus cyaneus</i>      |                | E/U          | G5    | S1B,S3N |
| yellow-crowned night-heron foraging habitat | <i>Nyctanassa violacea</i> |                | T/T          | G5    | S2B     |

We have also checked the Natural Heritage Database for occurrences of rare plant species or ecological communities. The Natural Heritage Database does not have any records for rare plants or ecological communities on or within 1/4 mile of the site.

Attached is a list of rare species and ecological communities that have been documented from Bergen County. If suitable habitat is present at the project site, these species have potential to be present.

Status and rank codes used in the tables and lists are defined in the attached EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS.

If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive I-Map-NJ website at the following URL, <http://www.state.nj.us/dep/gis/depsplash.htm> or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program.

PLEASE SEE THE ATTACHED 'CAUTIONS AND RESTRICTIONS ON NHP DATA'.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

*Valerie Salice for*

Herbert A. Lord  
Data Request Specialist

cc: Robert J. Cartica  
Lawrence Niles  
NHP File No. 06-4007471

## CAUTIONS AND RESTRICTIONS ON NATURAL HERITAGE DATA

The quantity and quality of data collected by the Natural Heritage Program is dependent on the research and observations of many individuals and organizations. Not all of this information is the result of comprehensive or site-specific field surveys. Some natural areas in New Jersey have never been thoroughly surveyed. As a result, new locations for plant and animal species are continuously added to the database. Since data acquisition is a dynamic, ongoing process, the Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of New Jersey. Information supplied by the Natural Heritage Program summarizes existing data known to the program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The attached data is provided as one source of information to assist others in the preservation of natural diversity.

This office cannot provide a letter of interpretation or a statement addressing the classification of wetlands as defined by the Freshwater Wetlands Act. Requests for such determination should be sent to the DEP Land Use Regulation Program, P.O. Box 401, Trenton, NJ 08625-0401.

The Landscape Project was developed by the Division of Fish & Wildlife, Endangered and Nongame Species Program in order to map critical habitat for rare animal species. Natural Heritage Database response letters will also list all species (if any) found during a search of the Landscape Project. However, this office cannot answer any inquiries about the Landscape Project. All questions should be directed to the DEP Division of Fish and Wildlife, Endangered and Nongame Species Program, P.O. Box 400, Trenton, NJ 08625-0400.

**This cautions and restrictions notice must be included whenever information provided by the Natural Heritage Database is published.**



NJ Department of Environmental Protection  
Division of Parks and Forestry

Natural Lands Management

## EXPLANATIONS OF CODES USED IN NATURAL HERITAGE REPORTS

### FEDERAL STATUS CODES

The following U.S. Fish and Wildlife Service categories and their definitions of endangered and threatened plants and animals have been modified from the U.S. Fish and Wildlife Service (F.R. Vol. 50 No. 188; Vol. 61, No. 40; F.R. 50 CFR Part 17). Federal Status codes reported for species follow the most recent listing.

- LE Taxa formally listed as endangered.
- LT Taxa formally listed as threatened.
- PE Taxa already proposed to be formally listed as endangered.
- PT Taxa already proposed to be formally listed as threatened.
- C Taxa for which the Service currently has on file sufficient information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species.
- S/A Similarity of appearance species.

### STATE STATUS CODES

Two animal lists provide state status codes after the Endangered and Nongame Species Conservation Act of 1973 (N.J.S.A. 17:27-28 et. seq.): the list of endangered species (N.J.A.C. 7:25-4.13) and the list defining status of indigenous, nongame wildlife species of New Jersey (N.J.A.C. 7:25-4.17(a)). The status of animal species is determined by the Nongame and Endangered Species Program (ENSP). The state status codes and definitions provided reflect the most recent lists that were revised in the New Jersey Register, Monday, June 3, 1991.

- D Declining species—a species which has exhibited a continued decline in population numbers over the years.
- E Endangered species—an endangered species is one whose prospects for survival within the state are in immediate danger due to one or many factors – a loss of habitat, over exploitation, predation, competition, disease. An endangered species requires immediate assistance or extinction will probably follow.
- EX Extirpated species—a species that formerly occurred in New Jersey, but is not now known to exist within the state.
- I Introduced species—a species not native to New Jersey that could not have established itself here without the assistance of man.
- INC Increasing species—a species whose population has exhibited a significant increase, beyond the normal range of its life cycle, over a long term period.
- T Threatened species—a species that may become endangered if conditions surrounding the species begin to or continue to deteriorate.
- P Peripheral species—a species whose occurrence in New Jersey is at the extreme edge of its present natural range.
- S Stable species—a species whose population is not undergoing any long-term increase/decrease within its natural cycle.
- U Undetermined species—a species about which there is not enough information available to determine the status.

Status for animals separated by a slash(/) indicate a dual status. First status refers to the state breeding population, and the second status refers to the migratory or winter population.

Special Concern applies to animal species that warrant special attention because of some evidence of decline, inherent vulnerability to environmental deterioration, or habitat modification that would result in their becoming a Threatened species. This category would also be applied to species that meet the foregoing criteria and for which there is little understanding of their current population status in the state.

Plant taxa listed as endangered are from New Jersey's official Endangered Plant Species List N.J.S.A. 1318-15.151 et seq.

E Native New Jersey plant species whose survival in the State or nation is in jeopardy.

#### REGIONAL STATUS CODES FOR PLANTS AND ECOLOGICAL COMMUNITIES

- LP Indicates taxa listed by the Pinelands Commission as endangered or threatened within their legal jurisdiction. Not all species currently tracked by the Pinelands Commission are tracked by the Natural Heritage Program. A complete list of endangered and threatened Pineland species is included in the New Jersey Pinelands Comprehensive Management Plan.
- HL Indicates taxa or ecological communities protected by the Highlands Water Protection and Planning Act within the jurisdiction of the Highlands Preservation Area.

#### EXPLANATION OF GLOBAL AND STATE ELEMENT RANKS

The Nature Conservancy has developed a ranking system for use in identifying elements (rare species and natural communities) of natural diversity most endangered with extinction. Each element is ranked according to its global, national, and state (or subnational in other countries) rarity. These ranks are used to prioritize conservation work so that the most endangered elements receive attention first. Definitions for element ranks are after The Nature Conservancy (1982: Chapter 4, 4.1-1 through 4.4.1.3-3).

#### GLOBAL ELEMENT RANKS

- G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2 Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
- G3 Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state; a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; with the number of occurrences in the range of 21 to 100.
- G4 Apparently secure globally; although it may be quite rare in parts of its range, especially at the periphery.
- G5 Demonstrably secure globally; although it may be quite rare in parts of its range, especially at the periphery.
- GH Of historical occurrence throughout its range i.e., formerly part of the established biota, with the expectation that it may be rediscovered.
- GU Possibly in peril range-wide but status uncertain; more information needed.
- GX Believed to be extinct throughout range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.
- G? Species has not yet been ranked.
- GNR Species has not yet been ranked.

## STATE ELEMENT RANKS

- S1** Critically Imperiled in New Jersey because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres). Elements so ranked are often restricted to very specialized conditions or habitats and/or restricted to an extremely small geographical area of the state. Also included are elements which were formerly more abundant, but because of habitat destruction or some other critical factor of its biology, they have been demonstrably reduced in abundance. In essence, these are elements for which, even with intensive searching, sizable additional occurrences are unlikely to be discovered.
- S2** Imperiled in New Jersey because of rarity (6 to 20 occurrences). Historically many of these elements may have been more frequent but are now known from very few extant occurrences, primarily because of habitat destruction. Diligent searching may yield additional occurrences.
- S3** Rare in state with 21 to 100 occurrences (plant species and ecological communities in this category have only 21 to 50 occurrences). Includes elements which are widely distributed in the state but with small populations/acreage or elements with restricted distribution, but locally abundant. Not yet imperiled in state but may soon be if current trends continue. Searching often yields additional occurrences.
- S4** Apparently secure in state, with many occurrences.
- S5** Demonstrably secure in state and essentially ineradicable under present conditions.
- SA** Accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range; a few of these species may even have bred on the one or two occasions they were recorded; examples include European strays or western birds on the East Coast and vice-versa.
- SE** Elements that are clearly exotic in New Jersey including those taxa not native to North America (introduced taxa) or taxa deliberately or accidentally introduced into the State from other parts of North America (adventive taxa). Taxa ranked SE are not a conservation priority (viable introduced occurrences of G1 or G2 elements may be exceptions).
- SH** Elements of historical occurrence in New Jersey. Despite some searching of historical occurrences and/or potential habitat, no extant occurrences are known. Since not all of the historical occurrences have been field surveyed, and unsearched potential habitat remains, historically ranked taxa are considered possibly extant, and remain a conservation priority for continued field work.
- SP** Element has potential to occur in New Jersey, but no occurrences have been reported.
- SR** Elements reported from New Jersey, but without persuasive documentation which would provide a basis for either accepting or rejecting the report. In some instances documentation may exist, but as of yet, its source or location has not been determined.
- SRF** Elements erroneously reported from New Jersey, but this error persists in the literature.
- SU** Elements believed to be in peril but the degree of rarity uncertain. Also included are rare taxa of uncertain taxonomical standing. More information is needed to resolve rank.
- SX** Elements that have been determined or are presumed to be extirpated from New Jersey. All historical occurrences have been searched and a reasonable search of potential habitat has been completed. Extirpated taxa are not a current conservation priority.
- SXC** Elements presumed extirpated from New Jersey, but native populations collected from the wild exist in cultivation.

**SZ** Not of practical conservation concern in New Jersey, because there are no definable occurrences, although the taxon is native and appears regularly in the state. An SZ rank will generally be used for long distance migrants whose occurrences during their migrations are too irregular (in terms of repeated visitation to the same locations), transitory, and dispersed to be reliably identified, mapped and protected. In other words, the migrant regularly passes through the state, but enduring, mappable element occurrences cannot be defined.

Typically, the SZ rank applies to a non-breeding population (N) in the state - for example, birds on migration. An SZ rank may in a few instances also apply to a breeding population (B), for example certain lepidoptera which regularly die out every year with no significant return migration.

Although the SZ rank typically applies to migrants, it should not be used indiscriminately. Just because a species is on migration does not mean it receives an SZ rank. SZ will only apply when the migrants occur in an irregular, transitory and dispersed manner.

**B** Refers to the breeding population of the element in the state.

**N** Refers to the non-breeding population of the element in the state.

**T** Element ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species. For example *Stachys palustris* var. *homotricha* is ranked "G5T? SH" meaning the full species is globally secure but the global rarity of the var. *homotricha* has not been determined; in New Jersey the variety is ranked historic.

**Q** Elements containing a "Q" in the global portion of its rank indicates that the taxon is of questionable, or uncertain taxonomical standing, e.g., some authors regard it as a full species, while others treat it at the subspecific level.

**.1** Elements documented from a single location.

**Note:** To express uncertainty, the most likely rank is assigned and a question mark added (e.g., G2?). A range is indicated by combining two ranks (e.g., G1G2, S1S3).

#### IDENTIFICATION CODES

These codes refer to whether the identification of the species or community has been checked by a reliable individual and is indicative of significant habitat.

**Y** Identification has been verified and is indicative of significant habitat.

**BLANK** Identification has not been verified but there is no reason to believe it is not indicative of significant habitat.

**?** Either it has not been determined if the record is indicative of significant habitat or the identification of the species or community may be confusing or disputed.

BERGEN COUNTY  
 RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
 THE NEW JERSEY NATURAL HERITAGE DATABASE

| NAME                       | COMMON NAME                | FEDERAL STATUS | STATE STATUS | REGIONAL STATUS | GRANK | SRANK    |
|----------------------------|----------------------------|----------------|--------------|-----------------|-------|----------|
| ACCIPITER COOPERII         | COOPER'S HAWK              |                | T/T          |                 | G5    | S3B, S4N |
| AMMODRAMUS SAVANNAHARUM    | GRASSHOPPER SPARROW        |                | T/S          |                 | G5    | S2B      |
| ASIO OTUS                  | LONG-EARED OWL             |                | T/T          |                 | G5    | S2B, S2N |
| BARTRAMIA LONGICAUDA       | UPLAND SANDPIPER           |                | E            |                 | G5    | S1B      |
| BUTEO LINEATUS             | RED-SHOULDERED HAWK        |                | E/T          |                 | G5    | S1B, S2N |
| CIRCUS CYANEUS             | NORTHERN HARRIER           |                | E/U          |                 | G5    | S1B, S3N |
| CISTOTHORUS PLATENSIS      | SEDFE WREN                 |                | E            |                 | G5    | S1B      |
| CLEMmys INSCULPTA          | WOOD TURTLE                |                | T            |                 | G4    | S3       |
| CLEMmys MUHLBERGII         | BOG TURTLE                 | LT             | E            |                 | G3    | S2       |
| CROTALUS HORRIDUS HORRIDUS | TIMBER RATTLESNAKE         |                | E            |                 | G4T4  | S2       |
| EUMECES FASCIATUS          | FIVE-LINED SKINK           |                | U            |                 | G5    | S3       |
| FALCO PEREGRINUS           | PEREGRINE FALCON           |                | E            |                 | G4    | S1B, S2N |
| FULICA AMERICANA           | AMERICAN COOT              |                | D            |                 | G5    | S1B      |
| HALIAEETUS LEUCOCEPHALUS   | BALD EAGLE                 | LT             | E            |                 | G4    | S1B, S2N |
| IXOBRYCHUS EXILIS          | LEAST BITTERN              |                | D/S          |                 | G5    | S3B      |
| LYNX RUFUS                 | BOBCAT                     |                | E            |                 | G5    | S3       |
| MELANERPES ERYTHROCEPHALUS | RED-HEADED WOODPECKER      |                | T/T          |                 | G5    | S2B, S2N |
| NEOTOMA MAGISTER           | ALLEGHENY WOODRAT          |                | E            |                 | G3G4  | S1       |
| NYCTANASSA VIOLACEA        | YELLOW-CROWNED NIGHT-HERON |                | T/T          |                 | G5    | S2B      |
| NYCTICORAX NYCTICORAX      | BLACK-CROWNED NIGHT-HERON  |                | T/S          |                 | G5    | S3B, S4N |
| PASSERCULUS SANDWICHENSIS  | SAVANNAH SPARROW           |                | T/T          |                 | G5    | S2B, S4N |
| PODILYMBUS PODICEPS        | PIED-BILLED GREBE          |                | E/S          |                 | G5    | S1B, S3N |
| POECECTES GRAMINEUS        | VESPER SPARROW             |                | E            |                 | G5    | S1B, S2N |
| STERNA ANTILLARUM          | LEAST TERN                 |                | E            |                 | G4    | S1B      |
| STRIX VARIA                | BARRED OWL                 |                | T/T          |                 | G5    | S3B      |
| AESHNA CLEPSYDRA           | MOTTLED DARNER             |                |              |                 | G4    | S2S3     |
| AESHNA TUBERCULIFERA       | BLACK-TIPPED DARNER        |                |              |                 | G4    | S1S2     |

\*\*\* Vertebrates

\*\*\* Invertebrates

BERGEN COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

| NAME                          | COMMON NAME                  | FEDERAL<br>STATUS | STATE<br>STATUS | REGIONAL<br>STATUS | GRANK | SRANK |
|-------------------------------|------------------------------|-------------------|-----------------|--------------------|-------|-------|
| ALASMIDONTA HETERODON         | DWARF WEDGEMUSSEL            | LE                | E               |                    | G1G2  | S1    |
| ALASMIDONTA UNDULATA          | TRIANGLE FLOATER             |                   | T               |                    | G4    | S3    |
| AMBLYSCIRTES HEGON            | PEPPER AND SALT SKIPPER      |                   |                 |                    | G5    | S1S2  |
| ARIGOMPHUS FURCIPER           | LILYPAD CLUBTAIL             |                   |                 |                    | G5    | S2    |
| CHLOSZYNE HARRISII            | HARRIS' CHECKERSPOT          |                   |                 |                    | G4    | S2S3  |
| CORDULEGASTER ERRONEA         | TIGER SPIKETAIL              |                   |                 |                    | G4    | S2    |
| ENALLAGMA LATERALE            | NEW ENGLAND BLUET            |                   |                 |                    | G3    | S1S2  |
| GOMPHUS ROGERSI               | SABLE CLUBTAIL               |                   |                 |                    | G4    | S1S2  |
| LAMPSILIS RADIATA             | EASTERN LAMPMUSSEL           |                   |                 |                    | G5    | S3    |
| LANTHUS VERNALIS              | SOUTHERN PYGMY CLUBTAIL      | T                 |                 |                    | G4    | S2S3  |
| LESTES EURINUS                | AMBER-WINGED SPREADWING      |                   |                 |                    | G4    | S2    |
| LYCAENA HYLUS                 | BRONZE COPPER                |                   | E               |                    | G5    | S2    |
| NICOPHORUS AMERICANUS         | AMERICAN BURYING BEETLE      | LE                | E               |                    | G2G3  | SH    |
| POLITES MYSTIC                | LONG DASH                    |                   |                 |                    | G5    | S3?   |
| PONTIA PROTODICE              | CHECKERED WHITE              |                   | T               |                    | G4    | S1    |
| PYRGUS WYANDOT                | APPALACHIAN GRIZZLED SKIPPER |                   | E               |                    | G2    | SH    |
| SATYRIUM ACADICUM             | ACADIAN HAIRSTREAK           |                   |                 |                    | G5    | S2S3  |
| SPEYERIA APHRODITE            | APHRODITE FRITILLARY         |                   |                 |                    | G5    | S2S3  |
| SPEYERIA IDALIA               | REGAL FRITILLARY             |                   |                 |                    | G3    | SH    |
| TACHOPTERYX THOREYI           | GRAY PETALTAIL               |                   |                 |                    | G4    | S1    |
| WILLIAMSONIA LINTNERI         | RINGED BOGHAUNTER            |                   |                 |                    | G3    | SH    |
| *** Nonvascular plants        |                              |                   |                 |                    |       |       |
| SPHAGNUM CONTORTUM            | SPHAGNUM                     |                   | E               |                    | G5    | S1    |
| SPHAGNUM MAJUS SSP NORVEGICUM | SPHAGNUM                     |                   | E               |                    | G5?IT | S1.1  |
| *** Vascular plants           |                              |                   |                 |                    |       |       |
| ADLUMIA FUNGOSA               | CLIMBING FUMITORY            |                   |                 |                    | G4    | S2    |
| AGASTACHE NEPETOIDES          | YELLOW GIANT-HYSSOP          |                   |                 |                    | G5    | S2    |
| AGASTACHE SCROPHULARIIFOLIA   | PURPLE GIANT-HYSSOP          |                   |                 |                    | G4    | S2    |

30 AUG 2004

BERGEN COUNTY  
 RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
 THE NEW JERSEY NATURAL HERITAGE DATABASE

| NAME                                  | COMMON NAME               | FEDERAL STATUS | STATE STATUS | REGIONAL STATUS | GRANK | SRANK |
|---------------------------------------|---------------------------|----------------|--------------|-----------------|-------|-------|
| ALOPECURUS AEGUALIS VAR AEGUALIS      | SHORT-AWN MEADOW-FOXTAIL  |                |              |                 | G5T?  | S2    |
| AMELANCHIER HUMILIS                   | LOW SERVICE-BERRY         |                |              |                 | G5    | S1    |
| AMMANNIA LATIFOLIA                    | KOHN'S TOOTHcup           | E              |              |                 | G5    | S1    |
| ANEMONE CANADENSIS                    | CANADA ANEMONE            |                |              |                 | G5    | SX    |
| APLECTURUM HYEMALE                    | PUTTROOT                  | E              |              |                 | G5    | S1    |
| ARABIS HIRSUTA VAR PYCNOCARPA         | WESTERN HAIRY ROCKCRESS   |                |              |                 | G5T5  | S2    |
| ASCLEPIAS VERTICILLATA                | WHORLED MILKWEED          |                |              |                 | G5    | S2    |
| ATHYRIUM PYCNOCARPON                  | GLADE FERN                | E              |              |                 | G5    | S1    |
| BOTRYCHIUM ONEIDENSE                  | BLUNT-LOBE GRAPE FERN     |                |              |                 | G4Q   | S2    |
| BOUTELOUA CURTIPENDULA                | SIDE-OATS GRAMA GRASS     | E              |              |                 | G5T5  | S1    |
| CALLITRICHE PALUSTRIS                 | MARSH WATER-STARWORT      |                |              |                 | G5    | S2    |
| CAREX DISPERMA                        | SOFT-LEAF SEDGE           |                |              |                 | G5    | S1    |
| CAREX HAYDENII                        | CLOUD SEDGE               | E              |              |                 | G5    | S1    |
| CAREX PSEUDOCYPERUS                   | CYPERUS-LIKE SEDGE        | E              |              |                 | G5    | S1    |
| CAREX TUCKERMANII                     | TUCKERMAN'S SEDGE         | E              |              |                 | G4    | S1    |
| CAREX UTRICULATA                      | BOTTLE-SHAPED SEDGE       | E              |              |                 | G5    | S2    |
| CASTILLEJA COCCINEA                   | SCARLET INDIAN-PAINTBRUSH |                |              |                 | G5    | S2    |
| CERCIS CANADENSIS                     | REDBUD                    | E              |              |                 | G5T5  | S1    |
| CHENOPODIUM SIMPLEX                   | MAPLE-LEAF GOOSEFOOT      |                |              |                 | G5    | S2    |
| CORALLORHIZA WISTERIANA               | SPRING CORALROOT          |                |              |                 | G5    | SX    |
| COREOPSIS ROSEA                       | ROSE-COLOR COREOPSIS      |                |              | LP              | G3    | S2    |
| CRATAEGUS CHRYSOCARPA VAR CHRYSOCARPA | FIREBERRY HAWTHORN        |                |              |                 | G5T?  | S1    |
| CRYPTOGRAMMA STELLERI                 | SLENDER ROCKBRAKE         | E              |              |                 | G5    | SH.1  |
| CYPRIPEDIUM REGINAE                   | SHOWY LADY'S-SLIPPER      | E              |              |                 | G4    | S1    |
| DIRCA PALUSTRIS                       | LEATHERWOOD               |                |              |                 | G4    | S2    |
| DOELLINGERIA INFIRMA                  | CORNEL-LEAF ASTER         |                |              |                 | G5    | S2    |
| DRYOPTERIS CELSA                      | LOG FERN                  |                |              |                 | G4    | SX    |
| EQUISETUM PRATENSE                    | MEADOW HORSETAIL          | E              |              |                 | G5    | S1    |

30 AUG 2004

BERGEN COUNTY  
RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
THE NEW JERSEY NATURAL HERITAGE DATABASE

| NAME                                      | COMMON NAME                     | FEDERAL STATUS | STATE STATUS | REGIONAL STATUS | GRANK  | SRANK |
|---|---------------------------------|----------------|--------------|-----------------|--------|-------|
| ERIOPHORUM GRACILE                        | SLENDER COTTON-GRASS            |                | E            |                 | G5T?   | SH    |
| GNAPHALIUM MACOUNII                       | WINGED CUDWEED                  |                | E            |                 | G5     | SH    |
| HEMICARPHA MICRANTHA                      | SMALL-FLOWER HALFCHAFF SEDGE    |                | E            |                 | G4     | S1    |
| HOTTONTIA INFLATA                         | FEATHERFOIL                     |                | E            |                 | G4     | S1    |
| HYPERICUM ADPRESSUM                       | BARTON'S ST. JOHN'S-WORT        |                | E            |                 | G2G3   | S2    |
| HYPERICUM MAJUS                           | LARGER CANADIAN ST. JOHN'S WORT |                | E            |                 | G5     | S1    |
| ISOTRIA MEDEOLOIDES                       | SMALL WHORLED POGONIA           | LT             | E            |                 | G2     | S1    |
| LEMNA PERPUSILLA                          | MINUTE DUCKWEED                 |                | E            |                 | G5     | S1    |
| LEMNA VALDIVIANA                          | PALE DUCKWEED                   |                | E            |                 | G5     | S1    |
| LIMOSELLA SUBULATA                        | AWL-LEAF MUDWORT                |                | E            |                 | G4G5   | S1    |
| LINUM SULCATUM                            | GROOVED YELLOW FLAX             |                | E            |                 | G5T5   | S1    |
| LUZULA ACUMINATA                          | HAIRY WOOD-RUSH                 |                | E            |                 | G5T4T5 | S2    |
| MELANTHIUM VIRGINICUM                     | VIRGINIA BUNCHFLOWER            |                | E            |                 | G5     | S1    |
| MIMULUS ALATUS                            | WINGED MONKEY-FLOWER            |                | E            |                 | G5     | S3    |
| NUPHAR MICROPHYLLUM                       | SMALL YELLOW POND-LILY          |                | E            |                 | G5T4T5 | SH    |
| PLATANATHERA HYPERBOREA VAR<br>HYPERBOREA | LEAFY NORTHERN GREEN ORCHID     |                | E            |                 | G5T5   | SX    |
| POA AUTUMNALIS                            | FLEXUOUS SPEAR GRASS            |                | E            |                 | G5     | SH.1  |
| PRENANTHES RACEMOSA                       | SMOOTH RATTLESNAKE-ROOT         |                | E            |                 | G5T?   | SH    |
| PSYCNANTHEMUM TORREI                      | TORREY'S MOUNTAIN-MINT          |                | E            |                 | G2     | S1    |
| SACCHARUM ALOPECUROIDUM                   | SILVER PLUME GRASS              |                |              |                 | G5     | SH    |
| SALIX LUCIDA SSP LUCIDA                   | SHINING WILLOW                  |                |              |                 | G5T5   | S1    |
| SALIX PEDICELLARIS                        | BOG WILLOW                      |                | E            |                 | G5     | S1    |
| SCHOENOPLECTUS TORREYI                    | TORREY'S BULRUSH                |                | E            |                 | G5?    | S1    |
| SCIRPUS MARITIMUS                         | SALTMARSH BULRUSH               |                | E            |                 | G5     | SH    |
| SCLERIA PAUCIFLORA VAR<br>CAROLINIANA     | CAROLINA NUT-RUSH               |                |              |                 | G5T4T5 | S2    |
| SCLERIA VERTICILLATA                      | WHORLED NUT-RUSH                |                | E            |                 | G5     | S1    |
| SCUTELLARIA LEONARDII                     | SMALL SKULLCAP                  |                | E            |                 | G4T4   | S1    |

BERGEN COUNTY  
 RARE SPECIES AND NATURAL COMMUNITIES PRESENTLY RECORDED IN  
 THE NEW JERSEY NATURAL HERITAGE DATABASE

| NAME                     | COMMON NAME            | FEDERAL STATUS | STATE STATUS | REGIONAL STATUS | GRANK | SPANK |
|--------------------------|------------------------|----------------|--------------|-----------------|-------|-------|
| SOLIDAGO RIGIDA          | PRAIRIE GOLDENROD      |                | E            |                 | G5T5  | S1    |
| STACHYS HYSSOPIFOLIA     | HYSSOP HEDGE-NETTLE    |                | E            |                 | G5    | S2    |
| THUJA OCCIDENTALIS       | ARBORVITAE             |                | E            |                 | G5    | S1    |
| TIARELLA CORDIFOLIA      | FOAMFLOWER             |                | E            |                 | G5T5  | S1    |
| TRIPHORA TRIANTHOPHORA   | THREE BIRDS ORCHID     |                | E            |                 | G3G4  | S1    |
| TROLLIUS LAXUS SSP LAXUS | SPREADING GLOBE FLOWER |                | E            |                 | G4T3  | S1    |
| VERBENA SIMPLEX          | NARROW-LEAF VERVAIN    |                | E            |                 | G5    | S1    |
| VIOLA CANADENSIS         | CANADIAN VIOLET        |                | E            |                 | G5T7  | S1    |
| VIOLA SEPTENTRIONALIS    | NORTHERN BLUE VIOLET   |                | E            |                 | G5    | S1    |



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
 NATIONAL MARINE FISHERIES SERVICE

Habitat Conservation Division  
 James I. Howard Marine  
 Sciences Laboratory  
 74 Magruder Road  
 Highlands, New Jersey 07732

July 24, 2006

TO: Sarah Krow  
 Langan Engineering & Environmental Services  
 River Drive Center 1  
 Elmwood Park, NJ 07407

SUBJECT: New Meadowlands Stadium Project  
 Mcadowlands Sports Complex, Block 107.01, Lot I.  
 East Rutherford, Bergen Co

 Karen Greene  
 (Reviewing Biologist)

We have reviewed the information provided to us regarding the above subject project. We offer the following preliminary comments pursuant to the Endangered Species Act, the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act:

**Endangered and Threatened Species**

There are no endangered or threatened species in the project area.

Endangered and threatened species under NMFS jurisdiction may be present in the project area, please contact Endangered Species Coordinator, NOAA Fisheries Service's Protected Resources Division, One Blackburn Drive, Gloucester, MA 01930-2298 for additional information.

**Fish and Wildlife Coordination Act**

The following may be present in the project area: Anadromous and resident fish, forage and benthic species

DEPENDENT UPON THE PROJECT DETAILS POSSIBLE RECOMMENDATIONS INCLUDE:

If all work remains in the uplands, no special conditions are needed. BMPs should be used for construction and site operation.

**Magnuson-Stevens Fishery Conservation and Management Act**  
**Essential Fish Habitat**

No EFH has been designated in the project area.

The Hackensack River has been designated as Essential Fish Habitat (EFH) for one or more species. Provided all work occurs in the uplands, impacts to EFH are expected to be no more than minimal and additional EFH consultation by the federal action agency will not be required. For a listing of EFH and further information, please go to our website at:

<http://www.nemo.noaa.gov/hcd>

-If you wish to discuss this further, please call 732-872-3023-

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State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE  
Governor

Office of Brownfield Reuse  
ph: 609-633-1499

LISA P. JACKSON  
Commissioner

Barbara Lampen  
New Jersey Sports and Exposition Authority  
50 Route 120  
East Rutherford, NJ 07073

August 9, 2006

Mary R. Musca  
Project Executive  
New Meadowlands Stadium, LLC  
655 Madison Ave, 7<sup>th</sup> Floor  
New York, NY 10021

Re: Jets/Giants Stadium, Rutherford, Bergen County  
Preliminary Assessment Report,  
Site Investigation Report  
Remedial Action Workplan,  
Methane Investigation Report,

The Department has reviewed the above referenced documents prepared by Langan Engineering and Environmental Services, for the New Meadowlands Stadium Project. The comments below are specifically identified as to which case team member raised them and the specific workplan or report they are regarding.

**Allan Motter**

**Preliminary Assessment Report:**

**Appendix B – Historical Aerial Photograph and Topographic Map Review:** The New Meadowlands Stadium Company and New Jersey Sports and Exposition Authority (NMSC & NJSEA) should provide a copy of the historical aerial photographs reviewed for NJDEP review.

**Appendix C – State and Federal Government Database Search:** The NMSC & NJSEA should state what LQG RCRIS Generator violations were cited for the Sports Complex between 1986 and 1987.

**Appendix H – Potentially Contaminated Areas of Concern:** NMSC & NJSEA must address the AOCs within the current Giants Stadium structure either during or upon completion of the dismantling of the stadium.

**Appendix H – Potentially Contaminated Areas of Concern: AOC #11: X-Ray Room:** NMSC & NJSEA state that “sampling is not proposed” for this AOC. Given that there is a

report of radioactive chemicals being poured down the sink in this area, NMSC & NJSEA should scan the area with a Geiger counter to determine the presence or absence of radioactive contamination prior to and following demolition of the stadium.

**Appendix J – Non-indigenous Fill Materials:** NMSC & NJSEA state that “NJDEP’s Historic Fill of the Weehawken Quadrangle Map” is included as Figure 7. Figure 7 should include a depiction of the site boundaries and should be labeled as Figure 7.

#### **Site Investigation Report and Remedial Action Workplan:**

**3.5 Overall Assessment of Impacts to the Property:** NMSC & NJSEA state that mercury “was only detected as two locations, both of which are located within the area of the proposed Giants Practice Facility.” The mercury is not delineated, and NMSC & NJSEA must delineate the mercury in accordance with Technical Requirements for Site Remediation, N.J.A.C. 7:26E-4.1(a). Given that the Giants Practice facility will be constructed with a methane venting system, NMSC & NJSEA must provide certification from a licensed New Jersey Professional Engineer (NJ PE) that the ventilation system will address any potential concerns from the presence of mercury in the facility subsurface.

**4.1 Soil Sampling: September 2005 Investigation:** NMSC & NJSEA state that dieldrin “was not delineated since it only exceeded the Residential Use Standard of the NJDEP SCC.” The dieldrin must be delineated in accordance with N.J.A.C. 7:26E-4.1(a).

**4.3.3 QA/QC Samples:** NMSC & NJSEA state that “a trip blank and a field blank ... were utilized during both the June and September 2005 SI field activities.” NMSC & NJSEA should state whether trip blanks and field blanks were used during the November and December sampling events.

**5.1 Historic Fill Material (AOC-6):** NMSC & NJSEA state that “borrow fill materials were secured from off-site upland or hydraulic sources to supplement suitable materials on the site.” The test pit and boring logs suggest construction debris in many of the locations. NMSC & NJSEA should determine whether construction material was used to fill any portion of the site and whether contaminants not typically associated with historic fill are associated with the construction debris.

**6.1.1 Surface Water Bodies:** NMSC & NJSEA state that “surface water bodies were not identified as environmentally sensitive areas on the property. However, surface water bodies are located within one-quarter of a mile of the subject property.” The stormwater management lagoons are located adjacent to the site and receive stormwater runoff from the site. Stormwater lagoons can be attractive to wildlife and function as an ecologically sensitive area (ESA). Given that the lagoons are potentially impacted by the site, NMSC & NJSEA should determine whether the lagoons are functioning as ESAs and if the site is impacting these ESAs.

**6.1.2 Wetlands:** NMSC & NJSEA state that “wetlands were not identified as an environmentally sensitive area on the site.” Wetlands are located adjacent to the site; therefore, wetlands must be addressed as an ESA.

**6.1.4 Vegetation:** NMSC & NJSEA state that “vegetation is not considered an environmentally sensitive area on the site. Wetlands are located immediately adjacent to the western border of the site.” Wetlands and wetland vegetation must be addressed as ESAs.

**6.3.2 Overland Flow:** NMSC & NJSEA state that "overland flow is not a perceived migration pathway." Given that the stormwater management lagoons are located adjacent to the site and receive stormwater runoff from the site, they must be addressed as ESAs.

**6.4 Conclusions:** NMSC & NJSEA state that "no further actions are recommended." The above comments must be addressed within the BEE before a no further action (NFA) can be approved for ESAs.

**7.2.3 Remedial Design:** NMSC & NJSEA state that they propose "to delineate the extent of the soil contamination" for benzene. NMSC & NJSEA should consider removal of the benzene impacted soil along with the removal of the PCB impacted soil.

**8.0 Soil Reuse Proposal:** NMSC & NJSEA do not address sampling of stockpiled soils for on-site reuse. This issue must be addressed in the Soil Reuse Proposal.

**8.5 Regulatory Activities at Site of Origin:** NMSC & NJSEA state that a "monetary penalty for PCBs usage and failure to label and report to proper authority" was assessed for the "Meadowlands Racetrack/Giants Stadium [on] 28 August 1996." NMSC & NJSEA should state whether the PCBs observed in soil on site are site related.

**9.2 Historic Fill Sampling Procedures:** NMSC & NJSEA state that "a total of 132 test pits/soil borings were advanced throughout the site to characterize and evaluate the nature of the historic fill materials within the site boundary." In accordance with N.J.A.C. 7:26E-4.6(b), at least four borings per acre are required with appropriate analysis, representative of the aerial extent of the site. Given the size of the site, this quantity may be reduced; however, additional sample locations are required in the following areas: between ES-6 and ES-8, between ES-8 and ES-12, between Stadium Road and ES-13, between ESB-9 and ES-13, between ES-13 and the southern site boundary, between the northern boundary and ES-4, and between ES-1 and the southern boundary. NMSC & NJSEA should provide an amended sampling plan.

NMSC & NJSEA state that "a total of 121 samples were collected for laboratory analysis, 193 of which were analyzed." NMSC & NJSEA should clarify how many sample locations there were, how many samples were collected and how many samples were analyzed.

**11.3 Alternative Fill Material:** NMSC & NJSEA state that "it may be necessary to utilize recycled concrete and asphalt generated during redevelopment activities as fill material." NMSC & NJSEA should provide documentation that the recycled concrete and asphalt were properly characterized in accordance with all applicable regulations prior to on-site reuse.

**14.3.12 Perimeter Air Monitoring:** NMSC & NJSEA state that "air monitoring is usually required whenever there is the potential for airborne contamination leaving the site." NMSC & NJSEA should provide a perimeter air monitoring plan (PAM) that will address each phase of earthwork. Given the lack of VOCs, with the exception of benzene in one area, the PAM will need to only address PM<sub>10</sub> for the majority of the site.

**Figure 3:** NMSC & NJSEA should provide an overlay of the proposed construction on Figure 3 to better determine which contaminants are associated with which phase of the construction activities.

**Methane Investigation Report:**

**3.1 Sampling Program:** NMSC & NJSEA state that "the first 20 samples collected were shipped to Air Toxics LTD of Folsom, California where they were analyzed for methane by ASTM Method D 1946. The final seven samples collected were shipped to Accutest Laboratories of Dayton, New Jersey and analyzed for EPA Method TO-3." Neither laboratory is certified to perform the analysis that they performed. In addition, TO-3 is not a valid method for methane detection. Therefore, the data was not reviewed for acceptability. Given that the conclusion is that a methane venting system is required, reanalysis is not required. All future methane analysis should use a method certified for methane analysis conducted by a laboratory certified to perform that analysis.

**5.0 Preliminary Methane Remediation Design Recommendations:** The conclusions are that a methane venting system needs to be installed and that "these preliminary recommendations will be refined based on more complete and detailed architectural and structural drawings of the proposed stadium, associated facilities and buildings, and indoor practice facility." The final design must be certified by a NJ PE to be effective for all contaminants which may result in vapor intrusion in any of the structures.

**Figure 3:** NMSC & NJSEA should provide an overlay of the proposed construction on Figure 3 to better determine which methane levels are associated with which phase of the construction activities.

## Jeff Story

### **Preliminary Assessment**

Appendix A, The AOCs are described. AOC 7 pertains to historic spills including gasoline and diesel spills and a report that radioactive chemicals were poured down a drain at the facility. Langan states that they will continue to gather information regarding the status of each of these cases to determine if site investigation activities are warranted.

NMSC & NJSEA will also need to investigate and remediate the historic spills if any evidence of the spills are found during site demolition. This would include surveying the site for radioactive materials prior to and during demolition.

### **Site Investigation Report/Remedial Action Workplan**

**Section 5.1.1, SI Findings -** NMSC & NJSEA state that no visual or olfactory evidence of soil impacts were observed, except as noted in test pit TP-1 and boring ES-3. Green-tinted gravel below the asphalt pavement was noted at TP-1 and olfactory indicators were noted in ES-3, however, the boring log for ES-3 does not indicate that odors were observed.

NMSC & NJSEA should revise the boring log for ES-3 to indicate that odors were noted during drilling.

**Section 5.1.2, Recommendations and Section 7.2.3, Remedial Design** NMSC & NJSEA recommend that PCB-impacted soils (i.e., total PCB concentrations greater than 10 parts per million, ppm) be excavated and disposed of offsite. NMSC & NJSEA also recommend that the

extent of the benzene contamination detected in the area of ES-3 be delineated and a temporary groundwater monitoring well be installed at this location to determine if groundwater has been impacted.

The proposal is conditionally acceptable to BGWPA. As discussed in the PAR (e.g., Appendix A), the site was occupied by a trucking facility or warehouse/distribution center which was located on the eastern portion of the property, adjacent to Route 120, within the area that is currently occupied by the west peripheral road; this is first shown on a June 21, 1966 aerial photograph. Soil boring ES-3 is in this area. Other structures were identified in aerial photographs from 1961, 1969 and 1974. Therefore, NMSC & NJSEA shall show these structures and truck parking areas on a figure and use this information to select sampling locations to compare with existing soil data and to delineate the extent of the benzene contamination in the area of ES-

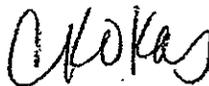
In addition, NMSC & NJSEA shall submit specific details of the soil and groundwater sampling and analytical methods that will be used, along with appropriate quality assurance/quality control (QA/QC) measures that will be used. This information shall be included in a Remedial Investigation Work Plan (RIWP). See the RIWP requirements specified at N.J.A.C. 7:26E-4.2; where information specified to be included in the RIWP has been previously provided in the SI Report, NMSC & NJSEA may reference the applicable sections of that report.

NMSC & NJSEA noted that phenol was detected above the IGWSSC at one location (i.e., boring B-1) and was delineated during the September 2005 SI field activities.

A temporary well shall be installed at the location of boring B-1 to determine if groundwater has been impacted by phenol.

If you would like to schedule a meeting please contact me at your earliest convenience.

Sincerely,



Colleen Kokas  
Office of Brownfield Reuse

C. Bob Koto Langan Engineering & Environmental Services  
River Drive Center 1  
Elmwood Park, NJ 07407-1338



In Reply Refer to:  
SP 06/32  
06 10057

## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

New Jersey Field Office  
Ecological Services  
927 North Main Street, Building D  
Piscataway, New Jersey 08232  
Tel: 609/646 9310  
Fax: 609/646 0352  
<http://www.fws.gov/northeast/njfieldoffice/>



Mr. Robert R. Coberio, Executive Director  
New Jersey Meadowlands Commission  
One DeKorte Park Plaza  
Lyndhurst, New Jersey 07071

AUG 11 2006

Mr. Gary Sondermeyer, Director of Operations  
New Jersey Department of Environmental Protection  
401 East State Street  
P.O. Box 407  
Trenton, New Jersey 08625

Re: *Public Notice: Request for Comments on the Scoping Document for the Proposed Meadowlands Stadium Project to be Constructed Within the NJSEA's Meadowlands Sports Complex*

Dear Messrs. Coberio and Sondermeyer:

The U.S. Fish and Wildlife Service (Service) has reviewed the New Jersey Meadowlands Commission's (NIMC) May 24, 2006 Public Notice and the May 2006 Scoping Document for the New Jersey Sports and Exposition Authority's (NJSEA) proposed New Meadowlands Stadium Project (Project) in East Rutherford, Bergen County, New Jersey. The proposed Project will replace the present 30-year-old Giants Stadium with a new state-of-the-art stadium and four related ancillary components, nearly all of which are to be located within the existing footprint of the current Meadowlands Sports Complex (MSC).

Five distinct components of the Project have been identified in the Scoping Document. In addition to the stadium itself, the stadium component of the proposed Project is likely to include retail stores, a hall of fame, sponsored areas, program areas, club lounges, and banquet/conference/dining facilities. The four other components of the proposed Project will include:

- (1) a new Giants Training Facility of 400,000 square feet located on 20 acres in the southwest corner of the current MSC;
- (2) reconfigured parking areas and tailgating zones (20,000 square feet total divided among four zones of 5,000 square feet each) that will feature unique structures to provide game and/or event retail, food, and beverage operations and restroom facilities;

- (3) on-site circulation and transportation improvements, including roadways, pedestrian and vehicular inter-connections, to be integrated with off-site improvements, such as the realignment of nearby access and toll roads and the replacement of toll plazas; and
- (4) ancillary facilities compatible with the development and operation of the stadium: broadcast facilities; sports-medicine, health, and fitness clinics and facilities; retail stores and restaurants; and sponsored areas.

The Project also will necessitate the relocation, replacement, and enhancement of existing water, stormwater, sewer, electric, gas and other infrastructure on the MSC.

#### AUTHORITY

Comments are provided pursuant to the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*; 87 Stat. 884) and the Migratory Bird Treaty Act of 1918 (MBTA; 40 Stat 755; 16 U.S.C. 703-712). Service comments and recommendations are consistent with the intent of the Service's Mitigation Policy (*Federal Register* Vol. 46, No. 15, January 23, 1981). These comments do not preclude separate review and comment by the Service pursuant to the National Environmental Policy Act of 1969, as amended (NEPA; 83 Stat. 852; 42 U.S.C. 4321 *et seq.*), or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) regarding review of existing permit conditions for the project site or any forthcoming application(s) for Department of the Army (DA) permits for the proposed Project. Additional review comments on the Scoping Document are provided as technical assistance.

#### PROJECT AND SITE INFORMATION

The Project's purpose, as stated in the NJSEA's Scoping Document is to continue the redevelopment of the MSC by providing a state-of-the-art stadium, practice facilities, and ancillary development. The original development of the MSC required federal and State permits, including: (1) DA Permit 72-009, issued by the U.S. Army Corps of Engineers (Corps) on January 23, 1976, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Federal Water Pollution Control Act of 1972 (86 Stat. 816; P.L. 92-500; now known as the Clean Water Act [CWA], 33 U.S.C. 1344); (2) a National Pollution Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (USEPA) pursuant to the Section 402 of the CWA (33 U.S.C. 1342); and (3) the 1972 State Hearing Officers' Report and Recommendations (SHORR) Regarding the Proposed Sports Complex [*i.e.*, the original Giants Stadium] in the Hackensack Meadowlands. The Service has requested a copy of the NPDES permit from the USEPA. To date, the Service has not yet received a copy of the original National PDES permit.

At a minimum, the proposed Project will require the following:

- (1) a notification to the Federal Aviation Administration regarding several structures (the stadium and temporary construction cranes) that will exceed 150 feet in height;

- (2) consultations required by the NJSEA's enabling legislation, including: (a) review of the project's location, type and character with the NJMC pursuant to N.J.S.A. 5:10-5[x]; and (b) review and approvals from the NJMC and New Jersey Department of Environmental Protection (NJDEP) regarding "ecological factors constituting the environment of the Hackensack meadowlands to the end that the delicate environmental balance of the Hackensack meadowlands may be maintained and preserved" pursuant to N.J.S.A. 5:10-23;
- (3) a Stream Encroachment Permit (N.J.S.A. 58:16A-50 *et seq.*; N.J.A.C. 7:8-3.15); Section 401 (33 U.S.C. 1341) Water Quality Certificate; New Jersey PDES Permit (N.J.S.A. 58:10A-1 *et seq.*; N.J.A.C. 7:14A); Approvals of the Preliminary Assessment Report, Site Investigation Report, and Remedial Action Work Plan (N.J.A.C. 7:26E-6.2); and other approvals/permits pursuant to New Jersey's Safe Drinking Water Act (N.J.S.A. 12A-1 *et seq.*) from the NJDEP;
- (4) a Coastal Zone Consistency Determination (N.J.S.A. 13:19-1 *et seq.*; see below) from the NJMC and NJDEP;
- (5) a Certification of Soil Erosion and Sediment Control Plans (N.J.S.A. 23:5-29) from the New Jersey Department of Agriculture;
- (6) approval of building plans (N.J.A.C. 5:23) from the New Jersey Department of Community Affairs; and
- (7) a Major Access Permit (N.J.A.C. 16:47) from the New Jersey Department of Transportation.

The subject Project is being coordinated with additional projects to be located on the MSC site. Ongoing construction of the Xanadu Redevelopment Project (Xanadu) adjacent to the Continental Airlines Arena will provide several entertainment venues, and additional retail and other, mixed-use, facilities on the MSC site. Construction of Xanadu is subject to conditions of other DA and State permits. The proposed Meadowlands Roadway and Railroad Improvement Project (MR&R) is currently being planned to improve roadway and public rail transportation to the MSC, will also require DA and State permits, and is subject to conditions of the existing DA permit and conclusions and recommendations of the 1972 SHORR.

## HACKENSACK MEADOWLANDS REMEDIATION, RESTORATION, AND PROTECTION

Presently, commensurate with strong public support, numerous State and federal efforts are underway to remediate, enhance, restore, and protect the Hackensack Meadowlands ecosystem. As you know, the NJMC, Service, and Corps are partners in the *Hackensack Meadowlands Ecosystem Restoration* to restore wetland sites throughout the Hackensack Meadowlands District (HMD). The NJMC and Service also are supporting the development of the NJDEP's *Wildlife Action Plan for the Hackensack Meadowlands* to manage the area's fish and wildlife resources.

The Service and NJDEP also are members of the Biological Technical Assistance Group (BTAG) that advises the USEPA regarding the cleanup of Superfund sites in the Meadowlands (and elsewhere in New Jersey), including the three Superfund Sites that are located along Berry's Creek near the MSC. Pursuant to Congressional directive (P.L. 109-80), the Service has established the Hackensack Meadowlands Initiative (Initiative), a watershed partnership including the NJMC, NJDEP, Corps, USEPA, National Park Service, National Marine Fisheries Service, and the National Fish and Wildlife Foundation, to remediate and restore the entire Meadowlands ecosystem. In support of and to help guide this Initiative, the Service has developed *The Hackensack Meadowlands Initiative: Preliminary Conservation Planning*, which is currently in draft undergoing review by the Initiative partners.

## SERVICE COMMENTS

### Overview

The proposed Project will occupy the MSC site, an extensive area (approximately 750 acres) of former wetlands. The Service understands that the proposed Project will not expand any further into adjoining wetlands; however, we note that the Scoping Document incorrectly identifies the boundaries of the project study area. The boundaries identified in the Scoping Document should be corrected to include the existing lagoon areas, which will be used for stormwater management by the proposed Project. The Service also noted several inconsistent statements in the Scoping Document regarding the proposed Project's impacts, public financing, and certain process (e.g., regulatory) issues, which are discussed in detail below. In addition, the Service is uncertain about the conditions of the DA permit and the 1972 SHORR that apply to the MSC and about the NJSEA's implementation of State and federal permits for the original Giants Stadium project.

Even though confined to the existing MSC site (including the lagoon areas), the proposed Project may result in adverse impacts on wetlands and fish and wildlife resources in the Hackensack Meadowlands ecosystem. Discussed below are Service concerns and recommendations regarding potential adverse environmental impacts of the proposed Project upon State-listed endangered, threatened, and "special concern" species that occur in the Hackensack Meadowlands ecosystem, especially in the vicinity of the MSC (i.e., the Berry's Creek subbasins). Other concerns include the potential for the proposed Project to contribute to cumulative adverse impacts on fish and wildlife resources and facilitate the dispersal of exotic, invasive species throughout adjoining areas. Certain adverse impacts of the proposed Project on wetlands and their biota (i.e., cumulative and indirect impacts from the built landscape; spread of invasive species) may also be exacerbated by related projects (Xanadu, MR&R).

In view of ongoing efforts to remediate, enhance, and restore contaminated sites in the Meadowlands, the Service is concerned regarding the Project's potential to contribute to establishment of attractive nuisances<sup>1</sup> and/or population sinks<sup>2</sup> of fish and wildlife at adjacent or

<sup>1</sup> Attractive nuisance- Anything that is attractive to animals but potentially a danger to their survival, health, or reproduction.

<sup>2</sup> Population sink- An environment in which a species' total mortality exceeds its reproduction; thus, immigration from other, more productive "source" populations is necessary to maintain the "sink."

downstream sites within the Meadowlands. The Service is concerned especially that the proposed Project may exacerbate effects of environmental contamination in the Berry's Creek subbasins, which are among the worst mercury-contaminated wetlands in North America. Without proper design, stormwater management systems on the MSC site could disturb mercury-laden sediments in the Berry's Creek subbasins, subsequently allowing mercury to disperse tidally throughout the Meadowlands ecosystem.

The Service recognizes the potential for certain components of the proposed Project, such as the parking and tailgating zones, training facility, ancillary facilities, and their infrastructure to adversely affect water quality, and thus fish and wildlife resources and wetlands.

Communication towers, presumably a component of broadcast facilities that are listed in the Scoping Document as a likely ancillary facility, also are recognized to have adverse impacts on biotic resources, especially migratory birds due to collisions. These concerns and specific Service recommendations are discussed below.

### **Inconsistencies in the Scoping Document**

The Scoping Document (pg. 17) states "The Stadium Project will not result in significant incremental social, economic, or environmental impacts." Information provided in the Scoping Document and other sources indicates that the proposed project will likely have adverse environmental impacts (as discussed below). The Service recommends that the environmental impact statement (EIS) accurately represent both the potential positive and negative environmental impacts of the proposed Project, including a thorough review and assessment of impacts on fish, wildlife, and other resources on the MSC and adjoining landholdings. The Scoping Document (pg. 17) also states that the project is being privately financed, yet later statements (pg. 22) indicate that remediation costs for the proposed Project will be passed to the public via reimbursements as part of a Redevelopment Agreement with the NJDRP pursuant to the State's Brownfield Act (New Jersey P.L. 1997, Chapter 278). In the Section titled Regulatory Setting, the Scoping Document (pg. 28) states "The role of the NJMC, in this instance (land-use planning perspective), is limited to its role in the Consultation Process as discussed above." If the NJMC's role is limited by the NJSEA's enabling legislation to the two consultation processes required by N.J.S.A. 5:10-5[x] and 5:10-23, the Service requests clarification regarding:

- (1) the role of the NJMC pursuant to any Coastal Zone Consistency Determination for the proposed Project; and
- (2) the participation of the NJMC in MIMAC meetings regarding any existing (previously issued) federal DA and State permits or applications for federal DA or State permits for the MSC.

The Service recognizes that the NJMC has been a valuable contributor to, and partner in, the MIMAC; thus, the Service seeks clarification whether the NJMC's participation is potentially limited by the NJSEA's enabling legislation (identified above).

### Conditions of Previous State and Federal Permits

The Service requests clarification regarding the compliance of the NJSEA with conditions and recommendations of the federal permits and the 1972 SHORR. The Service understands that the conditions of the 1972 SHORR, DA permit 72-009, and the National PDES permit still apply to the use of the site. The 1972 SHORR contained recommendations that were conditions of the NJMC's and NJDEP's approval of the project. These recommendations were provided to: (1) prevent and minimize further contamination, fragmentation, and other adverse environmental impacts to the Berry's Creek wetlands and the surrounding Hackensack Meadowlands ecosystem; (2) compensate for lost wetlands, acreage, functions, and values resulting from the original Giants Stadium project. The Service understands that the many conclusions and recommendations of the 1972 SHORR are conditions of the NJMC's and NJDEP's approval "to the end that the delicate balance of the Hackensack meadowlands may be maintained and preserved" (as stated in N.J.S.A. 5:10-23, and reaffirmed later by the New Jersey Supreme Court in *New Jersey Sports & Exposition Authority v. McCrane, et als.*, 61 N.J. 1 [1972]). Furthermore, the conclusions and recommendations of the 1972 SHORR were discussed in the Corps' 1975 Statement of Findings and used to support the Corps' issuance of DA Permit 72-009 in 1976. Subsequently, the 2004 State Hearing Officers' Report for the Xanadu Redevelopment Project makes note of changed conditions and recommendations from the 1972 SHORR for the original Giants Stadium project.

*Several of the conditions/recommendations were for tasks that spanned a period of time or were continuous in nature, like environmental monitoring or funding for environmental education. Such tasks shall be revisited to determine whether to continue, modify, reactivate, or suspend the specific efforts in the future. (pg. 7)*

The 2004 State Hearing Officers' Report for the Xanadu Redevelopment Project also makes note of an Environmental Liaison Committee of representatives from the NJDEP, HMDC, and NJSEA to monitor the progress of the development and ensure that the conditions of the approvals were addressed. Despite these steps, the Service is unaware of any notification from the permittee or the Environmental Liaison Committee to the Corps or the MIMAC regarding the status of or specific changes to conditions in State (i.e., the SHORR) permits on the MSC site. Since the conditions of State authorizations were considered in federal approvals, changes to the State conditions potentially affect the status of the federal permits. Thus, the Service requests that: (1) the NJSEA provide the MIMAC with an update and review of its permit compliance actions for existing State and federal permits for the MSC site, and (2) the Hearing Officers provide a copy of previous correspondence identifying specific changes to any conditions of the 1972 SHORR. The Service also requests that the NJMC and NJDEP inform all member agencies of MIMAC of future, proposed changes to any State permit for any project in the HMD for which a federal permit has also been issued. By copy of this letter to the Corps, USEPA, and other agency members of the MIMAC, the Service requests a review of compliance with DA and State permit conditions that apply to the project site.

## Federally Listed Species

These comments are provided in response to the Scoping Document and to the July 17, 2006 letter from Langan Engineering & Environmental Services (Elmwood Park, New Jersey) regarding the presence of federally listed (endangered and threatened) species in the vicinity of the proposed project. The presence of bald eagle (*Haliaeetus leucocephalus*) is increasing during fall migrations throughout the lower Hackensack River watershed; however, any impacts to migrating individuals are expected to be temporary and discountable. Except for those occasional, transient bald eagles, no other federally listed or proposed endangered flora or fauna under Service jurisdiction are known to occur within the vicinity of the proposed project site. Therefore, no further consultation pursuant to Section 7 of the ESA is required by the Service. If additional information on federally listed species becomes available, or if project plans change, this determination may be reconsidered.

## Other Species of Concern

Approximately 33 species that are State-listed or identified as "of special concern" have been reported to occur in the HMD (Enclosures 1 and 2). Certain of these species (e.g., peregrine falcon, *Falco peregrinus*) are known to breed and forage in the vicinity of the MSC. Other such species may occupy small pockets of vegetative cover (such as emergent wetlands) that occur in the vicinity of the MSC. In addition, certain State-listed species (e.g., black-crowned night-heron, *Nycticorax nycticorax*; American bittern, *Botaurus lentiginosus*) may feed on fish and wildlife resources that use the MSC or adjoining wetlands. Thus, despite the developed nature of most of the MSC, the Service recommends that project sponsors consult the New Jersey Endangered and Nongame Species Program<sup>3</sup> and the New Jersey Natural Heritage Program<sup>4</sup> for: (1) a thorough review of the MSC and adjacent wetland areas for State-listed and other species of concern, and (2) information regarding seasonal restrictions for construction and demolition activities that may be needed to protect such species.

## Impacts to Aquatic and Other Resources

The Scoping Document states that: (1) the project site contains few valuable natural resources, and (2) on-site wetlands, tidelands, vegetation, and wildlife will not be adversely affected by the proposed Project. The Corps' 1975 Statement of Findings (SOF) regarding DA Permit 72-009 indicates that on-site (MSC) mitigation for the original Giants Stadium would include: (1) transplantation of valuable vegetation, (2) additional plantings of native species, and (3) using the areas surrounding the lagoons as wildlife habitats. However, the Scoping Document does not confirm the existence of any mitigation areas referenced in DA Permit 72-009. The lack of on-site resources raises concerns that the mitigation for DA Permit 72-009 may not have been implemented. Failure to undertake required mitigation and to meet permit conditions are widely recognized as contributing to the nationwide loss of wetland functions and acreage (e.g., National Research Council, 2001). Thus, the Service recommends that the NJSEA, NJMC, and

<sup>3</sup> Endangered and Nongame Species Program, New Jersey Division of Fish and Wildlife, P.O. Box 400, Trenton, New Jersey 08625; Phone: 609-292-9400

<sup>4</sup> New Jersey Natural Heritage Program, Office of Natural Lands Management, Division of Parks and Forestry, Department of Environmental Protection, P.O. Box 404, Trenton, New Jersey 08625; Phone: 609-984-1339

NJDEP: (1) conduct a review of previous on-site mitigation activities, (2) identify and deconstruct any on-site mitigation areas that have been established to prevent future development of those areas, (3) include a thorough review and assessment of fish, wildlife, and other resources on the MSC and adjoining landholdings, and (4) develop a plan to protect those remaining resources and mitigation areas. This information should be provided in any environmental impact statement (EIS), which should include a thorough review and assessment of fish, wildlife, and other resources on the MSC and adjoining landholdings. The Service recommends that the NJSBA, NJMC, and NJDEP present their findings to the MIMAC. The Service is willing to assist in this effort by reviewing management plans to protect on-site resources.

### Cumulative Adverse Impacts

The Service is concerned that the proposed Project may contribute substantially to cumulative adverse impacts on the Hackensack Meadowlands watershed. For example, the proposed Project may contribute to additional losses of habitats used by wildlife around the periphery of the MSC. The proposed Project has the potential to increase contamination in the Berry's Creek subbasins through disturbance of contaminated sediments on-site and stormwater run-off from the MSC's extensive impervious surfaces (see below). Certain adverse impacts, such as from contaminants, also may be exacerbated by related projects (e.g., MR&R). The Service expressed numerous concerns about adverse impacts from the MR&R in its October 3, 2005 letter (Enclosure 3). The MR&R Project also appears to be inconsistent with the conclusions and recommendations (pg. 23) of the 1972 SHORR.

The importance of the Berry's Creek Tidal Marsh to the Hackensack Meadowlands ecosystem was acknowledged in the 1972 SHORR (pgs. 16-20). More recently, Service (2005) mapping, analyses, and planning have recognized that the lower Berry's Creek subbasins are situated between other subbasins in the HMD that have extensive wetland acreage (i.e., along the Hackensack River between Rt. 3 and Bellman's Creek, and along the Hackensack River between Rt. 3 and the Amtrak Bridge). Remediation and restoration of the Berry's Creek Tidal Marsh and adjoining areas may help establish large, contiguous wetland tracts of native vegetation to support healthy fish and wildlife populations. Thus, any EIS for the proposed Project must identify the potential for bioaccumulative, contaminant effects, so the proposed Project may be carefully planned and implemented to neither disturb nor contribute additional contamination to the Berry's Creek subbasin.

### Invasive, Exotic Species

The Scoping Document does not address the control of invasive species on the MSC site. Portions of the MSC, including lagoon areas and its borders with adjoining wetlands, are dominated by several exotic species such as tree-of-heaven (*Ailanthus altissima*) and the invasive form (Haplotype<sup>5</sup> M) of common reed (*Phragmites australis*; U.S. Army Corps of Engineers, 2004). The proposed Project will disturb extensive areas of the MSC, possibly including some areas bordering wetlands. Historically, disturbance of soils and sediments by human activities has contributed to the establishment of invasive, exotic species throughout many areas in the northeastern United States, including the Meadowlands (Bertness *et al.*, 2002;

<sup>5</sup> Haplotype- a set of closely linked genes that give rise to a specific form of a species.

Bart and Hartman, 2003; Burdick and Konisky, 2003). Without an invasive species control program in place, the proposed project may facilitate the dispersal of invasive exotic species on the MSC into surrounding areas.

The MSC is located near one of the busiest port complexes of the United States; thus, eradication and/or control of invasive, exotic species requires a long-term commitment. The Service recommends that the NJSEA develop a long-term plan to monitor and control and/or eradicate invasive species from the MSC. However, because of the high levels of contamination in adjoining wetlands (the Berry's Creek Tidal Marsh [Walden Marsh], Eight Day Swamp), the Service recommends that the NJSEA not control or otherwise disturb any vegetation in those areas at this time. The Service is available for additional technical assistance regarding invasive species.

### Environmental Contaminants

Much of the MSC complex is covered with historic fill; thus, soils on the MSC contain contaminants at levels that often exceed the NJDEP's Non-Residential Direct Contact Soil Cleanup Criteria. The Scoping Document acknowledges that hot spots of contaminants also are likely throughout the site and will require remediation. In addition to this on-site contamination, the MSC is surrounded by the mercury-contaminated wetlands of Berry's Creek, Berry's Creek Canal, Berry's Creek Tidal Marsh (Walden Marsh), and Eight-Day Swamp (e.g., U.S. Environmental Protection Agency, 2006). Mercury is highly toxic to fish and wildlife, bioaccumulates, causes diverse sublethal effects that reduce survival and reproduction in many animals (e.g., Wincer *et al.*, 2003), and presents the most problems to the remediation and restoration of the Meadowlands ecosystem.

The Service remains concerned about the NJSEA's implementation of State and federal permit conditions. Numerous conclusions, recommendations, and other statements were included in the 1972 SHORR regarding the value of the Berry's Creek wetlands to fish and wildlife, the magnitude of the contamination in the area, the need to address environmental contamination in Berry's Creek, and the NJSEA's commitment to addressing the area's substantial contaminant problems.

*The forms of life present in the Berry's Creek Marsh justify its preservation. But as also indicated at numerous points, preservation is not in itself sufficient. (pg. 20)*

*The present heavy metal concentrations which have accumulated in Kerry's Creek and in the Berry's Creek Tidal Marsh, pose a serious and continuing threat both to the Berry's Creek Marsh and to the Hackensack Meadowlands Wetlands and therefore should be removed. (pg. 20)*

*We make specific note in this regard of Mr. Pitney's Statement of July 25, 1972 that the Authority "is prepared and has always been prepared to take whatever steps are necessary for the management of this area." (pg. 20)*

*The Authority shall restore the Marsh using the scraping method recommended by Jack McCormick and Associates including the immobilization of toxic metals, the improvement of water quality, and re-establishment of pre-1900 vegetation. The scraping method will be initiated on an experimental basis until significant positive results therefrom are manifested. If such results are determined to be negative, the scraping method shall be abandoned and other acceptable restoration methods shall be applied. (pg. 23)*

*All expenses in the acquisition, restoration, and permanent management of the Berry's Creek Tidal Marsh shall be borne by the Authority. (pg. 24)*

The remediation and restoration of the Berry's Creek Tidal Marsh and other wetlands in the Berry's Creek subbasins would contribute to a large contiguous tract of wetlands (from Mill Creek through the Richard P. Kanc Natural Area to the Sawmill Creek Wildlife Management Area) that could provide exceptional habitats for fish and wildlife resources. Thus, the Service recommends that the NJSEA work with the Service and other federal and State regulatory and resource agencies to clarify the commitments made in the 1972 SHORR regarding the remediation and restoration of wetlands and waterbodies adjoining the MSC. Remediation of the Berry's Creek Tidal Marsh was acknowledged in the Corps' SOF supporting the issuance of DA permit 72-009.

### Stormwater Management

Details of the stormwater management plan for the proposed Project were not provided in the Scoping Document; nonetheless, the Service remains concerned about the management of stormwater on the entire MSC complex and the potential for stormwater to have adverse impacts on the Meadowlands ecosystem and its biota. The majority of the MSC is currently paved or covered by existing structures; nonetheless, the proposed Project will likely affect stormwater characteristics (e.g., discharge volume and velocity, contaminants). The Scoping Document indicates that stormwater will be discharged via the existing lagoon system under the existing NJPDES permit. However, stormwater management requirements have changed since the original development of the stormwater plan for the MSC site in the 1970s. As indicated in its July 1, 2004 letter to the NJMC regarding the Xanadu Redevelopment Project, the Service recognized that the then-proposed stormwater management systems needed revision. The Service recommends that the NJSEA work with the NJMC and the NJDEP to design and implement a state-of-the-art stormwater management system to address local stormwater management needs (e.g., peak discharge rates, discharge volumes, control of nonpoint source pollution).

### Wetland Buffers

Buffers are increasingly recognized for protecting wetlands from disturbances and adjacent land uses and for supporting ecosystem functions of wetlands, including moderating storm and flood waters, processing nutrients and contaminants, and providing habitats for fish and wildlife (e.g., Castello *et al.*, 1994; Wenger, 1999). Buffers perform disparate ecological functions in comparison to other uplands and wetlands, harbor a disproportionately high number of wildlife species, and have become a major focus in landscape restoration and management (e.g., Naiman

and Descamps, 1997; Allan, 2004). The extent to which buffers provide ecosystem functions and support wildlife varies with buffer (e.g., width) and wetland (e.g., hydraulics, vegetation) characteristics (Fischer and Fishenich, 2000). Preliminary Service (2006) assessments indicate that buffers are in poor condition throughout the entire Hackensack River watershed, especially in the HMD. For example, most buffer areas in the HMD are developed: only 13 percent of the 100-meter-wide upland area adjoining all wetlands in the HMD is vegetated.

The Service recommends that the NJSEA consider designs of its training facility, parking and tailgating zones, ancillary facilities, and related infrastructure (e.g., roadways) to reduce the footprint of the developed acreage in order to provide for natural buffer areas on the MSC. Examples of designs that would increase the acreage for buffer areas include tunnels, and multilevel parking structures, ancillary facilities, and roadways. Because such design features reduce the extent of impervious surfaces, they reduce and moderate the precipitation-runoff volume to be managed by any stormwater system. The Service encourages the NJSEA to work with the Initiative partners to incorporate broad (50-100 meter) buffers around the periphery of the MSC.

### The Built Landscape and Sustainable Development

The built landscape of urban and suburban areas is increasingly recognized for its manifold, adverse impacts to fish and wildlife. For example, some building design features (e.g., large, reflective glass areas) are recognized to contribute to substantial mortality of migratory birds (Klein, 1990). Thus, the Service encourages the NJSEA to work with the Hearing Agencies, agency partners of the Initiative, and others such as the United States Green Building Council (including the Leadership in Energy and Environmental Design Rating System) to promote environmentally responsible building practices and designs to achieve the highest standards of environmental quality and sustainable development. Such practices would employ innovative designs and technologies (e.g., energy sensors, living rooftops, water-reuse systems) to improve water and energy efficiency, material use and recycling, and aesthetics. With careful planning, "green development" can be economical and presents a positive public image.

### Communications Towers

The Scoping Document notes that broadcast facilities are likely to be included in the ancillary development component of the proposed Project. Based on information available through the Federal Communications Commission's (FCC) website, the Service notes that more than 58 separate communication towers up to 700 feet in height (average tower height = 333 feet) are located in or around the HMD. Many of these towers are guyed and are located in wetlands; the placement of communications towers in wetlands represents a non-water-dependent use, which is inconsistent with current federal guidelines (e.g., U.S. Fish and Wildlife Service, 2000). In addition, the cumulative adverse impacts of towers on fish and wildlife in the Meadowlands have not been determined.

Communication towers are recognized as potentially having many adverse impacts on fish and wildlife, especially birds during their spring and fall migrations (e.g., Shire *et al.*, 2000; Crawford and Engstrom, 2001). The Meadowlands is one of the most important stopover areas

on several migration corridors in the Atlantic Flyway for raptor, shorebird, waterfowl, and passerine bird species (Dunn *et al.*, 1989). Many of the bird species that occur in and migrate through the Meadowlands are recognized as vulnerable to communication towers (Enclosure 4).

Communication towers may also result in other adverse impacts on fish and wildlife resources due to their modification (*e.g.*, filling) and contamination (*e.g.*, copper radials and ground straps) of wetland sites. The Service encourages the NJMC and NJDEP to develop a plan to reduce tower impacts throughout the HMD and the surrounding watershed. A reduction in the adverse impacts of communication towers on fish and wildlife may be achieved in part through: (1) collocation (including toploading) of new antennas on existing communication towers, (2) use of unguaged tower designs, (3) a reduction in tower heights, and (4) application of other engineering modifications and designs (*e.g.*, Breakall *et al.*, 2002; Vincent and the University of Rhode Island, 2004).

### SUMMARY OF RECOMMENDATIONS

The Service recommends that:

- (1) the NJSEA work closely with the Service, its partners in the Initiative, and other Meadowlands stakeholders in its planning of all MSC projects to avoid and minimize adverse environmental impacts on fish and wildlife resources;
- (2) the environmental impact statement (EIS) accurately represent both positive and negative environmental impacts of the proposed Project and include a thorough review and assessment of fish, wildlife, and other resources on the MSC landholdings and adjoining areas;
- (3) the NJMC clarify its role in determining Coastal Zone Consistency, reviewing environmental impacts, and participating in MIMAC meetings in permit consideration for MSC projects;
- (4) the NJSEA provide the MIMAC with an update and review of its actions in response to previous State and federal permits for the MSC site;
- (5) the NJSEA, NJMC, and NJDEP provide a copy of previous correspondence and other materials regarding the consideration of specific changes to conclusions and recommendations (*i.e.*, conditions) of the 1972 SHORR;
- (6) the Corps review the implementation of State and federal permit conditions for the original Giants Stadium project with the MIMAC members;
- (7) the NJMC and NJDEP inform all member agencies of the MIMAC of any future modifications to any State permit for any project in the IIMD for which a federal permit has been or is issued;

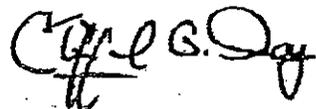
- (8) project sponsors consult the State's Endangered and Nongame Species Program and Natural Heritage Program to: (1) review the MSC and adjacent wetland areas for State-listed and other species of concern, and (2) determine the need for any seasonal construction or demolition activities on the site to protect any such species;
- (9) the Project EIS include a thorough review and assessment of: (1) fish, wildlife, and other resources on the MSC and adjoining landholdings; and (2) on-site mitigation sites and activities;
- (10) the NJSEA deed-restrict any mitigation areas identified on the MSC to prevent their future development, and develop a plan to protect those remaining resources and mitigation areas;
- (11) the NJSEA develop a long-term plan to monitor, control, and/or eradicate invasive species from the MSC;
- (12) the NJSEA not control or otherwise disturb any vegetation in wetlands adjoining the MSC at this time;
- (13) the NJSEA work with the Service and other Initiative partners to fulfill its commitment and the intent of the 1972 SHORR to remediate and restore Berry's Creek and the Berry's Creek Tidal Marsh;
- (14) the EIS for the proposed Project identify the potential for bioaccumulative, contaminant effects; moreover, the proposed Project be planned and implemented to neither mobilize existing contaminants nor contribute additional contamination to the Berry's Creek subbasin;
- (15) the NJSEA work with the NJMC and the NJDEP to design and implement a state-of-the-art stormwater management system to address local stormwater management needs (e.g., peak discharge rates, discharge volumes, nonpoint source pollution);
- (16) the NJSEA consider designs of its training facility, parking and tailgating zones, ancillary facilities, and related infrastructure (e.g., roadways) to reduce the footprint of the developed acreage and to provide broad (50 to 100-meter-wide) natural buffer areas on the MSC;
- (17) the NJSEA work with the NJMC, NJDEP, Initiative partners, and others to promote environmentally responsible building practices and designs to achieve the highest standards of environmental quality and sustainable development; and
- (18) the NJMC and NJDEP assess the cumulative impacts of communications towers, including the project area, on fish and wildlife, and subsequently develop a plan to reduce any adverse impacts on fish and wildlife from communication towers throughout the FMD and the surrounding watershed.

## CONCLUSION

The Service appreciates the opportunity to provide comments early in project planning. The Service encourages the NJSEA to make the same commitment to environmentally responsible development that it has made to providing premier sports and entertainment experiences on the MSC. The Hackensack Meadowlands has endured centuries of abuse and misuse. Thoughtful planning for, and responsible operation of, the proposed and related MSC projects have the potential to undo and rectify some historical adverse environmental impacts on the Hackensack Meadowlands ecosystem while promoting a responsible environmental image. Thus, the Service encourages the NJSEA, which was given control of more than 750 acres of former wetlands that comprise the MSC site, to work with the NJMC, NJDEP, federal agencies, and other stakeholders partnered in the long-term protection of the Meadowlands to: (1) avoid and minimize adverse environmental impacts of the MSC on wetlands and biotic resources; (2) honor its past commitments, including remediating environmental contamination in, and restoring portions of, the Berry's Creek subbasins; and (3) provide long-term support of regional efforts to restore and protect the Hackensack Meadowlands ecosystem.

The Service is available to provide review and comment as more detailed project plans are developed. Please contact John Staples or Stan Hales of my staff if you have any questions regarding the above Service comments. Mr. Staples and Dr. Hales can be reached at [John\\_Staples@fws.gov](mailto:John_Staples@fws.gov); [Stan\\_Hales@fws.gov](mailto:Stan_Hales@fws.gov); or at 609-646-9310 extensions 12 and 36, respectively.

Sincerely,



Clifford G. Day  
Supervisor

- Enclosures (4):
1. State-listed plants and animals in the Hackensack Meadowlands District.
  2. State-listed animals of special concern in the Hackensack Meadowlands District.
  3. The Service's October 3, 2005 letter to the NJDEP re: MR&R.
  4. The 25 bird species most frequently killed by communication towers.

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## Enclosure 1

State-listed plants and animals (Common name, scientific name, and NJ status [E - endangered, T = threatened]) in the Hackensack Meadowlands District.

| Common name                  | Scientific name                   | NJ Status |
|------------------------------|-----------------------------------|-----------|
| <b>Plants</b>                |                                   |           |
| Saltmarsh bulrush            | <i>Scirpus maritimus</i>          | E         |
| Seaside arrowgrass           | <i>Triglochin maritimum</i>       | E         |
| Cyperus-like sedge           | <i>Carex pseudocyperus</i>        | E         |
| Torrey's mountain mint       | <i>Pycnanthemum torrei</i>        | E         |
| Barton's St. John's wort     | <i>Hypericum adpressum</i>        | E         |
| Wafer-ash                    | <i>Ptelea trifoliata</i>          | E         |
| Smooth rattlesnake root      | <i>Prenanthes racemosa</i>        | E         |
| Canada hawkweed              | <i>Hieracium kalmii</i>           | E         |
| Dog fennel thoroughwort      | <i>Eupatorium capillifolium</i>   | E         |
| <b>Animals</b>               |                                   |           |
| Appalachian grizzled skipper | <i>Pyrgus wyandot</i>             | E         |
| Triangle floater             | <i>Alasmidonta undulata</i>       | T         |
| Wood turtle                  | <i>Clemmys insculpta</i>          | T         |
| Bald eagle                   | <i>Haliaeetus leucocephalus</i>   | E         |
| Osprey                       | <i>Pandion haliaetus</i>          | T         |
| Peregrine falcon             | <i>Falco peregrinus</i>           | E         |
| Northern goshawk             | <i>Accipiter gentiles</i>         | E         |
| Northern harrier             | <i>Circus cyaneus</i>             | E         |
| Red-shouldered hawk          | <i>Buteo lineatus</i>             | E         |
| Cooper's hawk                | <i>Accipiter cooperii</i>         | T         |
| Short-eared owl              | <i>Asio flammeus</i>              | E         |
| Long-eared owl               | <i>Asio otus</i>                  | T         |
| Barred owl                   | <i>Strix varia</i>                | T         |
| American bittern             | <i>Botaurus lentiginosus</i>      | E         |
| Bl.-crwd. night heron        | <i>Nycticorax nycticorax</i>      | T         |
| Yl.-crwd. night heron        | <i>Nyctanassa violacea</i>        | T         |
| Pied-billed grebe            | <i>Podilymbus podiceps</i>        | E         |
| Upland sandpiper             | <i>Bartramia longicauda</i>       | E         |
| Roseate tern                 | <i>Sterna dougallii</i>           | E         |
| Least tern                   | <i>Sterna antillarum</i>          | E         |
| Black skimmer                | <i>Rynchops niger</i>             | E         |
| Red knot                     | <i>Culidris canutus</i>           | T         |
| Red-headed woodpecker        | <i>Melanerpes erythrocephalus</i> | T         |
| Sedge wren                   | <i>Cistothorus platensis</i>      | E         |
| Loggerhead shrike            | <i>Lanius ludovicianus</i>        | E         |
| Bobolink                     | <i>Dolichonyx oryzivorus</i>      | T         |
| Vesper sparrow               | <i>Pooecetes gramineus</i>        | E         |
| Savannah sparrow             | <i>Passerculus sandwichensis</i>  | T         |

## Enclosure 2

## State-listed animal species of special concern in the Hackensack Meadowlands District.

| Common name                   | Scientific name                                 |
|-------------------------------|---|
| Marbled salamander            | <i>Ambystoma opacum</i>                         |
| Jefferson's salamander        | <i>Ambystoma jeffersonianum</i>                 |
| Northern spring salamander    | <i>Gyrinophilus porphyriticus porphyriticus</i> |
| Fowler's toad                 | <i>Bufo woodhousii fowleri</i>                  |
| Spotted turtle                | <i>Clemmys guttata</i>                          |
| Eastern box turtle            | <i>Terrapene carolina carolina</i>              |
| Northern diamondback terrapin | <i>Malaclemys terrapin terrapin</i>             |
| Least heron                   | <i>Icthyophaga exilis</i>                       |
| Tricolor heron                | <i>Egretta tricolor</i>                         |
| Little blue heron             | <i>Egretta caerulea</i>                         |
| Great blue heron              | <i>Ardea herodias</i>                           |
| King rail                     | <i>Rallus elegans</i>                           |
| Whimbrel                      | <i>Numenius phaeopus</i>                        |
| Spotted sandpiper             | <i>Actitis macularia</i>                        |
| Sanderling                    | <i>Calidris alba</i>                            |
| Common tern                   | <i>Sterna hirundo</i>                           |
| Black tern                    | <i>Chlidonias niger</i>                         |
| Caspian tern                  | <i>Sterna caspia</i>                            |
| Sharp-shinned hawk            | <i>Accipiter striatus</i>                       |
| Broad-winged hawk             | <i>Buteo platypterus</i>                        |
| American kestrel              | <i>Falco sparverius</i>                         |
| Common barn owl               | <i>Tyto alba</i>                                |
| Common nighthawk              | <i>Chordeiles minor</i>                         |
| Least flycatcher              | <i>Empidonax minimus</i>                        |
| Horned lark                   | <i>Eremophila alpestris</i>                     |
| Cliff swallow                 | <i>Petrochelidon pyrrhonota</i>                 |
| Winter wren                   | <i>Troglodytes troglodytes</i>                  |
| Veery                         | <i>Catharus fuscescens</i>                      |
| Gray-checked thrush           | <i>Catharus minimus</i>                         |
| Solitary vireo                | <i>Vireo solitarius</i>                         |
| Northern parula               | <i>Parula americana</i>                         |
| Black-throated green warbler  | <i>Dendroica virens</i>                         |
| Eastern meadowlark            | <i>Sturnella magna</i>                          |



State of New Jersey  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Environmental Regulation  
Office of Permit Coordination and Environmental Review  
401 East State Street  
P.O. Box 423  
Trenton, New Jersey 08625-0423  
Phone: (609) 292-3600 Fax: (609) 777-1330

DN S. CORZINE  
Governor

LISA P. JACKSON  
Commissioner

August 22, 2006

Mr. Robert Ceberio, Executive Director  
New Jersey Meadowlands Commission  
One DeKorte Park Plaza  
Lyndhurst, NJ 07071

Mr. Gary Sondermeyer, Director of Operations  
New Jersey Department of Environmental Protection  
401 East State Street  
PO Box 402  
Trenton, NJ 08625-0402

**RE: New Meadowlands Stadium Project  
Scoping Comments**

Dear Mr. Ceberio and Mr. Sondermeyer:

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of the New Meadowlands Stadium Project Scoping Document for the New Jersey Sports and Exposition Authority Consultation Process Environmental Impact Statement (EIS). We offer the following scoping comments for your consideration during the preparation of the EIS.

#### **Diesel Emissions**

The NJDEP's Diesel Risk Reduction Group is requesting that the EIS address implementation of a Diesel Emissions Mitigation Plan during the construction phase of this project. The plan should include a Particulate Matter (PM) exhaust emission reduction requirement of 35% for off-road/construction vehicles during the construction phase of the project.

A Diesel Emissions Mitigation Plan is currently being implemented by one of the general contractors at the adjacent Xanadu construction site. Attached, for your information, is a sample Diesel Emissions Mitigation Plan which could be included in bid specifications.

Please contact Bob Marcolina of the Diesel Risk Reduction Group at 609-633-7237 if you have any questions regarding the above comments.

### **Sustainability**

The NJDEP's Bureau of Sustainable Communities and Innovative Technologies' review of the scoping document offers the following comments regarding items that should be addressed in the EIS.

On page 9 of the scoping document, it is noted that the existing stadium will be demolished. New Jersey offers a variety of opportunities to recycle construction debris, also referred to as a Class B recyclable material. The Formal definition follows:

Class B recycling material means a source separated recyclable material which is subject to Department approval prior to receipt, storage, processing or transfer at a recycling center in accordance with N.J.S.A. 13:1E-99.34b, which includes, but is not limited to, the following:

- Source separated, non-putrescible, waste concrete, asphalt, brick, block, asphalt-based roofing, scrap and wood waste;
- Source separated, non-putrescible, waste materials other than metal, glass, paper plastic containers, corrugated and other cardboard resulting from construction, remodeling, repair and demolition operations on houses, commercial buildings, pavements and other structures;
- Source separated whole trees, tree trunks, tree parts, tree stumps, brush and leaves, provided that they are not composted;
- Source separated scrap tires; and
- Source separated petroleum contaminated soil.

Demolition material which is listed under the definition of a Class B Recycling material should be recycled. The NJDEP maintains a list of Class B recycling centers on its web site. For a list of Class B recycling facilities, including construction and demolition debris see <http://www.state.nj.us/dep/dshw/lrm/classbsch.htm>.

Pages 9, 10, and 11 describe the various components to the Stadium Project, including the New Meadowlands Stadium, the Ancillary Development, Parking and Tailgating Zones and Site Circulation. Also, on the top of page 23, it is noted that "energy conservation measures will be evaluated to the extent feasible using the Leadership in Energy and Environmental Design (LEED) criteria as a guideline."

The US Green Building Council's (USGBC) LEED Green Building Rating System as a whole, not just the energy conservation measures, should be assessed in EIS as a guide for all components of the Stadium Project. Attached please find an example of how the Detroit Lions designed their headquarters and training facility to LEED 2.0. This example illustrates a project of this scope and size is possible. The new Meadowlands Stadium Project is a wonderful opportunity to showcase green development in New Jersey.

Additionally, opportunities to use renewable energy should be investigated. The State currently provides rebates for renewable energy through the New Jersey Clean Energy Program. See their web site for more information: <http://www.njcleanenergy.com>.

If you need any further assistance or have any questions, especially with respect to the USGBC LEED Green Building Rating System, please contact Athena Sarafides of the Bureau of Sustainable Communities and Innovative Technologies at 609-633-1161.

#### **Solid and Hazardous Waste**

The NJDEP's Solid and Hazardous Waste Program's review of the scoping document offers the following comments regarding items that should be addressed in the EIS.

The proposed project is to redevelop and modernize the area by introducing new construction and/or remodeling the existing construction in the Meadowlands area. The Solid and Hazardous Waste Program is aware that in the past, portions of the meadowlands have been raised to the current grade by waste disposal.

An investigation to determine the nature of fill material should be performed. Prior to beginning an investigation, a Disruption application must be submitted to the Solid and Hazardous Waste Program in accordance with the Solid Waste Regulation at N.J.S.A. 7:26-2a.8(j) and Section 9 of the Technical Manual for Sanitary Landfill Permits and Approvals. The investigation must be performed in accordance with the requirements for remedial investigation of historic fill at N.J.A.C. 7:26E-4.6(b).

The scoping document also states that a methane gas survey will be performed. The methane gas survey should be conducted in accordance with the requirements of N.J.A.C. 7:26-2A8(h)9 so the results of the survey may be used, if necessary, when applying for a major disruption of construction activities. This includes conducting the survey to include the entire area of construction activities. An investigation report should be submitted to the NJDEP including the sample locations and levels of methane gas. The report will be evaluated to determine whether any gas venting system will be required.

In addition, detailed information should be provided in the EIS on how the waste being generated at various stages of the project implementation will be handled and where it will be directed.

More information on the Solid Waste Regulations is available on-line at [www.state.nj.us/dep/dshw](http://www.state.nj.us/dep/dshw). Please contact Sanjay Shah of the Solid and Hazardous Waste Program at 609-984-6599 if you have any questions regarding the above comments.

### **Wastewater Management**

The EIS should provide information regarding the current and proposed wastewater flows to the Bergen County Utility Authority. The EIS should address minimizing wastewater flows from each component of the project.

### **Permits and Approvals**

The EIS should provide a summary of the status of all the permits and approvals that are required for the project.

Thank you for the opportunity to comment on the scoping document.

Sincerely,



Kenneth C. Koschek  
Supervising Environmental Specialist  
Office of Permit Coordination  
and Environmental Review

### **Attachments**

C: Barbara Lampen, NJSEA  
Cheryl Rezendes, NJMC  
Dave Charette, Langan Engineering  
Bob Marcolina, NJDEP  
Athena Sarafides, NJDEP  
Sanjay Shah, NJDEP

## Diesel Emissions Mitigation Plan

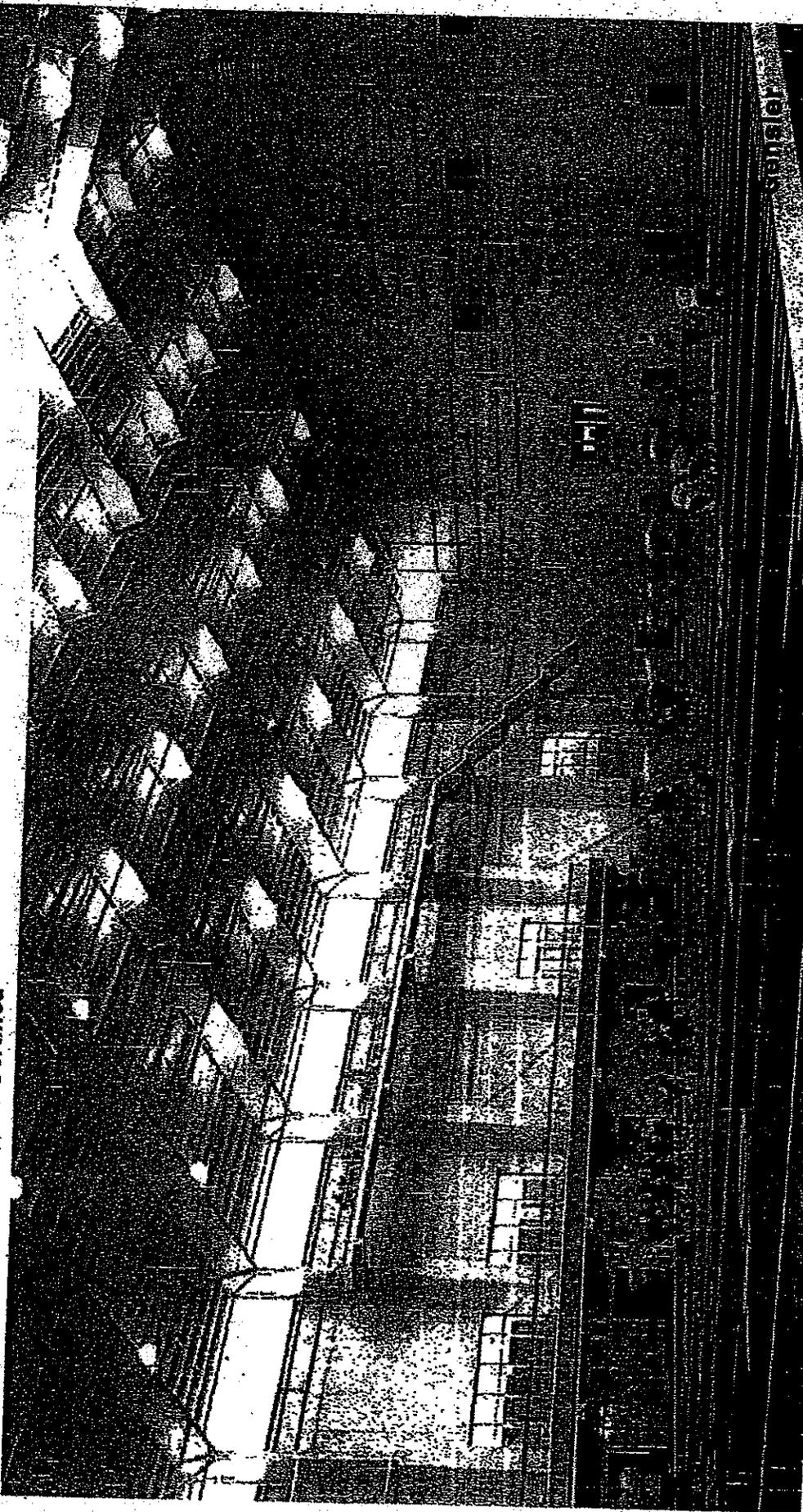
- The goal for this Mitigation Plan is a minimum 35% reduction in particulate matter (PM) emissions. This reduction shall be achieved utilizing retrofit equipment and/or low sulphur fuels specified below. The methodology in achieving this goal is up to the discretion of the contractor.
- All off road diesel powered construction vehicles/equipment with engine horsepower (HP) ratings of 60 HP and above, that are on the Xanadu project or are assigned to the project for a total of 30 days shall be retrofitted with Emission Control Devices and/or use Low Sulphur Diesel (LSD), Ultra Low Sulphur Diesel (ULSD) or Clean Fuels in order to reduce diesel emissions. A day is considered to any portion of a workday and the total number of days is the combination of consecutive and non-consecutive days. In addition, all motor vehicles and/or construction equipment shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety.
- Construction shall not proceed until the contractor submits a certified list of the diesel powered construction equipment that will be retrofitted with emission control devices or that will use LSD, ULSD or Clean Fuels. The list shall include (1) the vehicle/equipment unit number, type, make, model number, engine make, engine EPA family number, horsepower, displacement and contractor/sub-contractor name; (2) the emission control device make, model and EPA certification number or (3) the type and source of fuel to be used.
- The contractor shall submit on a quarterly basis, a spreadsheet that includes equipment type, equipment amount horsepower, activity hours, PM output, PM control devices and PM reduction. The initial spreadsheet shall be completed using estimates and projections. All subsequent spreadsheets shall incorporate empirical data to demonstrate the reduction of particulate matter towards the targeted goal of a minimum 35% reduction. (See attached spreadsheet).
- The Emission Control Device, or retrofit equipment, shall consist of retrofit equipment control technology that is included in the USEPA or California Air Resources Board (CARB) Verified Retrofit Technology List. The use of this equipment, although not verified for off-road use, will be acceptable to the Department.
- In no case shall high sulphur off road fuel be used on the project in any equipment covered by these rules. Content of sulphur in LSD will be a maximum of less than 500ppm per federal standards. The sulfur content in the ULSD shall not exceed 30ppm. Clean Fuels shall mean a fuel verified by EPA or CARB as a Clean Fuel.
- The contractor shall submit quarterly summary reports, updating the same information stated above, and include certified, by the contractor or subcontractor, copies of the fuel delivery slips for the report time period, noting which vehicles/equipment received the fuel. The addition or deletion of diesel equipment shall be included on the quarterly report. The certified delivery slips shall state whether the fuel delivered is LSD or ULSD diesel fuel (note that highway diesel fuel (LSD) is currently legally required to be ULSD fuel after mid-2006). The certification shall include an affidavit stating the veracity of the copies attached.
- The contractor shall make retrofitted vehicles available for any emissions spot testing performed by the NJDEP or its contractor.

- **Idling of delivery and /or dump trucks, or other diesel powered vehicles/equipment shall not be permitted during periods of non-active use. The contractor shall post signs advising the vehicle operators of these idling restrictions. Idling shall be limited to 20 minutes, other than initial warmup period in cold weather, as is required for efficient fuel combustion. Active use means that period of time when vehicles or equipment are actually performing their designated work function. The intervals before and after loading, unloading of deliveries, waiting in queue between loads, and waiting in queue to enter or exit the project, are subject to the idling restriction.**

An Overview on Sustainable Buildings and Communities

# Detroit Lions Headquarters and Training Facility

Detroit, Michigan 2002 LEED 2.0 Certified



Stanger

## Detroit Lions

### Practical commitment to LEED

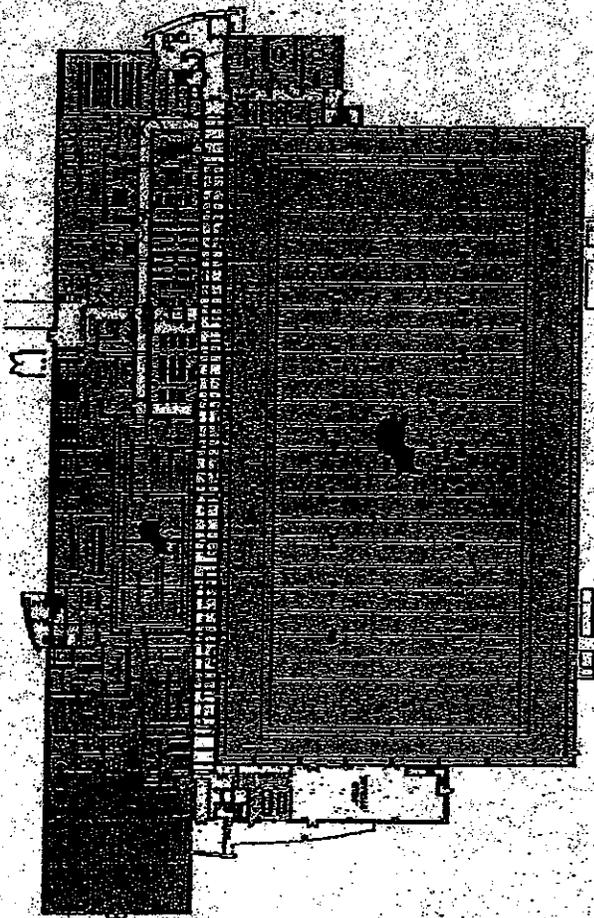
All Ford projects are to consider LEED  
Evaluate feasibility of LEED program points and cost

### New Headquarters

Integrated with Field house

### Indoor Field house "Butler Building"

Used 365 days/year



**PRODUCTIVITY:** "Everything that touches a player matters; because everything can help a player have a better attitude, prepare better and play better"

Gensler

## Detroit Lions

### **Daylighting**

Two-Story Naturally Day-lit Corridor

Natural North Daylighting

80% of enclosed space has access to daylight

### **Renewable and recyclable materials**

Bamboo flooring

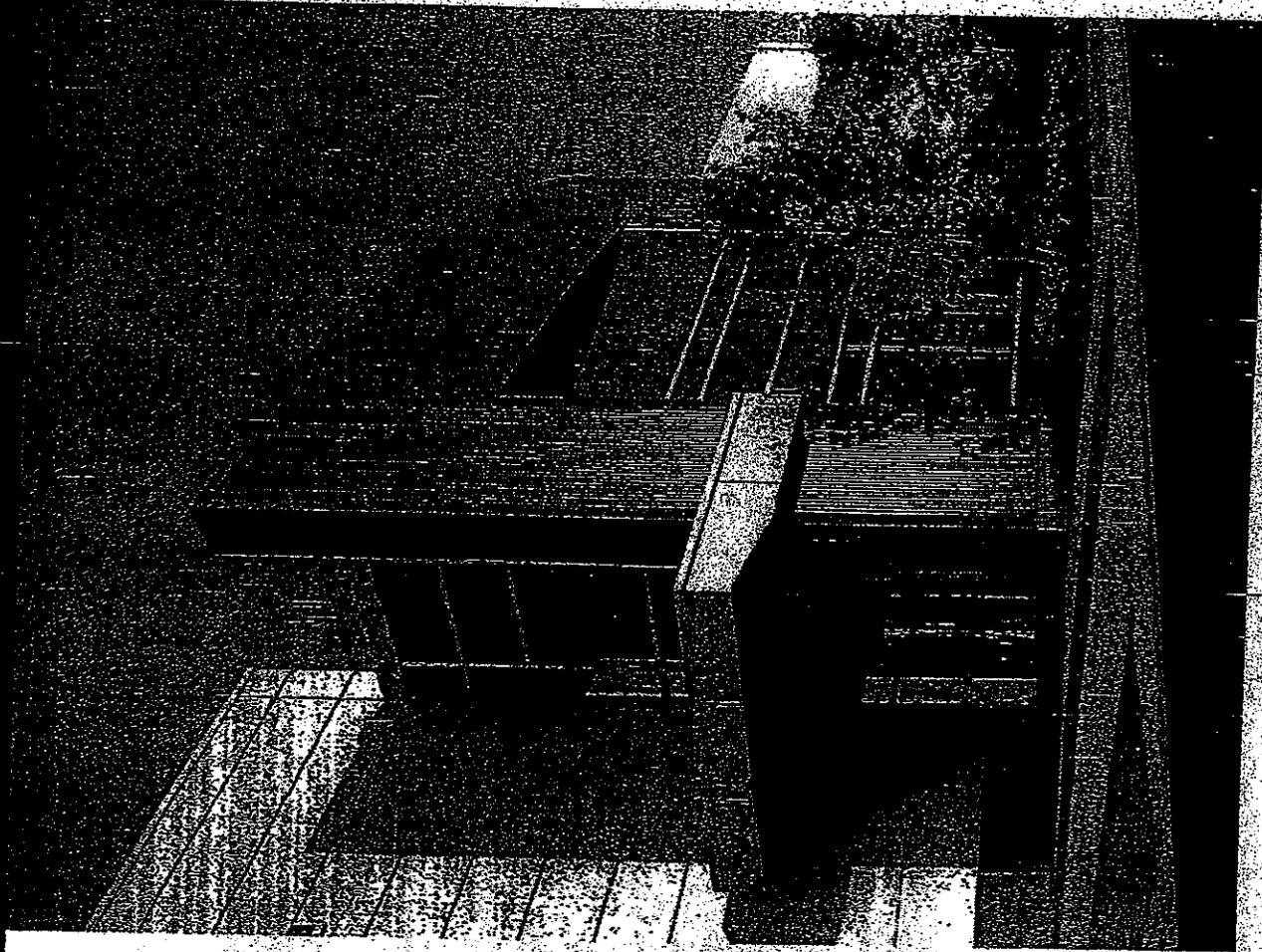
Recycled-rubber flooring

Low volatile organic compound (voc) materials

High performance to withstand wear

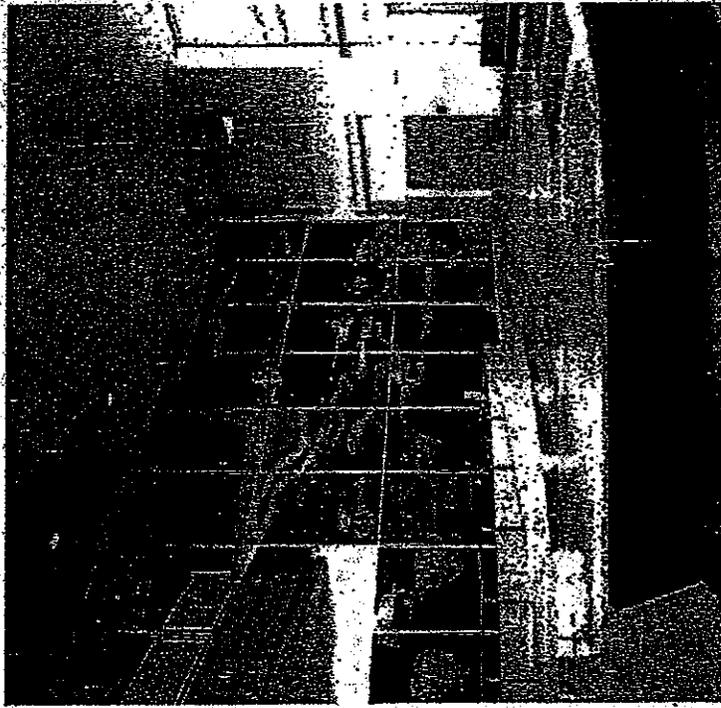
### **Conventional, efficient mechanical infrastructure**

Including naturally ventilated Fieldhouse



An Overview on Sustainable Buildings and Communities

**Detroit Lions**



Gensler



State of New Jersey

DEPARTMENT OF TRANSPORTATION  
P.O. Box 600  
Trenton, New Jersey 08625-0600

JON S. CORZINE  
*Governor*

KRIS KOLLURI, Esq.  
*Commissioner*

December 20, 2006

Mr. Joseph Fishinger, PE  
Vollmer Associates  
50 West 23<sup>rd</sup> St.  
New York, N.Y. 10010-5205

Re: Scope of Study  
Meadowlands Stadium

Dear Mr. Fishinger:

We have reviewed the revised scope of Study for the Meadowlands Stadium and the associated development and the Scope of Study is approved.

Very truly yours,

Charles R. Miller, PE  
Supervising Engineer  
Major Access Permits



Federal Aviation Administration  
Air Traffic Airspace Branch, ASW-520  
2601 Meacham Blvd.  
Fort Worth, TX 76137-0520

Aeronautical Study No.  
2006-AEA-5281-OE

Issued Date: 01/03/2007

Mary R. Musca  
New Meadowlands Stadium Company, LLC  
c/o New York Football Giants  
East Rutherford, NJ 07073

**\*\* PUBLIC NOTICE \*\***

The Federal Aviation Administration is conducting an aeronautical study concerning the following:

Structure: Building NE Corner - Stadium  
Location: East Rutherford, NJ  
Latitude: 40-48-46.21 N NAD 83  
Longitude: 74-4-21.15 W  
Heights: 225 feet above ground level (AGL)  
236 feet above mean sea level (AMSL)

The structure above exceeds obstruction standards. To determine its effect upon the safe and efficient use of navigable airspace by aircraft and on the operation of air navigation facilities, the FAA is conducting an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77.

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION

In the study, consideration will be given to all facts relevant to the effect of the structure on existing and planned airspace use, air navigation facilities, airports, aircraft operations, procedures and minimum flight altitudes, and the air traffic control system.

Interested persons are invited to participate in the aeronautical study by submitting comments to the above FAA address or through the electronic notification system. To be eligible for consideration, comments must be relevant to the effect the structure would have on aviation, must provide sufficient detail to permit a clear understanding, must contain the aeronautical study number printed in the upper right hand corner of this notice, and must be received on or before 02/09/2007.

This notice may be reproduced and circulated by any interested person. Airport managers are encouraged to post this notice.

Signature Control No: 493766-517573

(CIR)

Robert Alexander  
Specialist

Additional Information  
Part 77

Map(s)

Additional Information for ASN 2006-AEA-5281-OE

**Proposal:** To construct a(n) undefined to a height of 225 feet above ground level, 236 feet above mean sea level.

**Location:** The structure will be located 2.3 nautical miles south of TEB Airport reference point.

**Federal Aviation Regulations, FAR Part 77 Obstruction Standard(s) Exceeded:**

Section 77.23 (a) (2) by 25 feet - a height that exceeds 211 feet above mean sea level within 2.87 nautical miles of TEB.

Section 77.23 (a) (5) a height that affects an Airport Surface by penetrating Section 77.25 (a) Horizontal Surface by 77 feet as applied to TEB.



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Federal Aviation Administration  
Air Traffic Airspace Branch, ASW-520  
2601 Meacham Blvd.  
Fort Worth, TX 76137-0520

Aeronautical Study No.  
2006-AEA-5284-OE

Issued Date: 01/03/2007

Mary R. Musca  
New Meadowlands Stadium Company, LLC  
c/o New York Football Giants  
East Rutherford, NJ 07073

**\*\* PUBLIC NOTICE \*\***

The Federal Aviation Administration is conducting an aeronautical study concerning the following:

Structure: Building (NW Corner - Stadium)  
Location: East Rutherford, NJ  
Latitude: 40-48-52.64 N NAD 83  
Longitude: 74-4-23.15 W  
Heights: 225 feet above ground level (AGL)  
236 feet above mean sea level (AMSL)

The structure above exceeds obstruction standards. To determine its effect upon the safe and efficient use of navigable airspace by aircraft and on the operation of air navigation facilities, the FAA is conducting an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77.

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION

In the study, consideration will be given to all facts relevant to the effect of the structure on existing and planned airspace use, air navigation facilities, airports, aircraft operations, procedures and minimum flight altitudes, and the air traffic control system.

Interested persons are invited to participate in the aeronautical study by submitting comments to the above FAA address or through the electronic notification system. To be eligible for consideration, comments must be relevant to the effect the structure would have on aviation, must provide sufficient detail to permit a clear understanding, must contain the aeronautical study number printed in the upper right hand corner of this notice, and must be received on or before 02/09/2007.

This notice may be reproduced and circulated by any interested person. Airport managers are encouraged to post this notice.

Signature Control No: 493769-517565

(CIR)

Robert Alexander  
Specialist

Additional Information  
Part 77

Map(s)

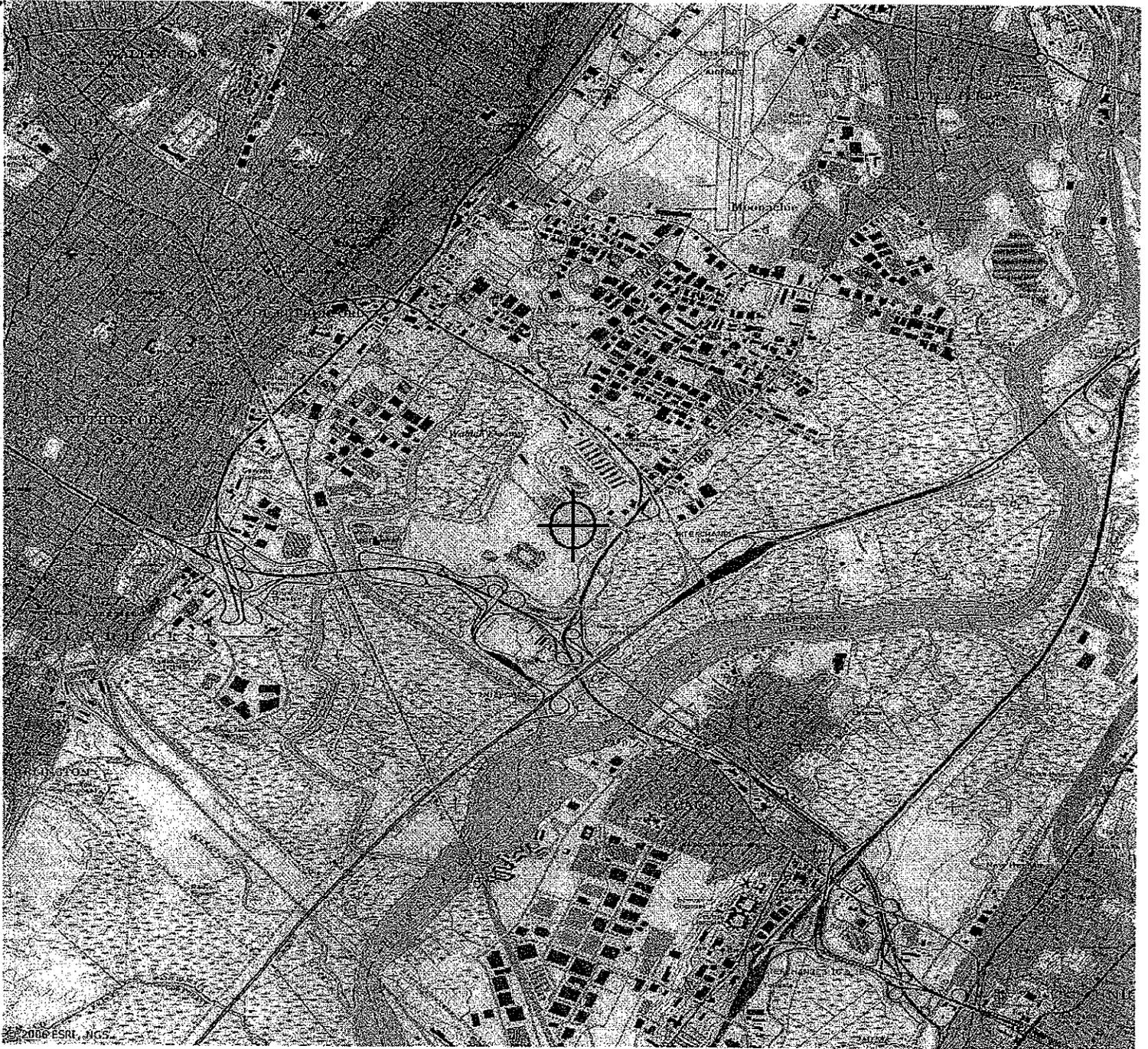
**Proposal:** To construct a(n) undefined to a height of 225 feet above ground level, 236 feet above mean sea level.

**Location:** The structure will be located 2.2 nautical miles south of TEB Airport reference point.

**Federal Aviation Regulations, FAR Part 77 Obstruction Standard(s) Exceeded:**

Section 77.23 (a) (2) by 25 feet - a height that exceeds 211 feet above mean sea level within 2.81 nautical miles of TEB.

Section 77.23 (a) (5) a height that affects an Airport Surface by penetrating Section 77.25 (a) Horizontal Surface by 77 feet as applied to TEB.



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Federal Aviation Administration  
Air Traffic Airspace Branch, ASW-520  
2601 Meacham Blvd.  
Fort Worth, TX 76137-0520

Aeronautical Study No.  
2006-AEA-5282-OE

Issued Date: 01/03/2007

Mary R. Musca  
New Meadowlands Stadium Company, LLC  
c/o New York Football Giants  
East Rutherford, NJ 07073

**\*\* PUBLIC NOTICE \*\***

The Federal Aviation Administration is conducting an aeronautical study concerning the following:

Structure: Building SE Corner - Stadium  
Location: East Rutherford, NJ  
Latitude: 40-48-44.77 N NAD 83  
Longitude: 74-4-29.16 W  
Heights: 225 feet above ground level (AGL)  
236 feet above mean sea level (AMSL)

The structure above exceeds obstruction standards. To determine its effect upon the safe and efficient use of navigable airspace by aircraft and on the operation of air navigation facilities, the FAA is conducting an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77.

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION

In the study, consideration will be given to all facts relevant to the effect of the structure on existing and planned airspace use, air navigation facilities, airports, aircraft operations, procedures and minimum flight altitudes, and the air traffic control system.

Interested persons are invited to participate in the aeronautical study by submitting comments to the above FAA address or through the electronic notification system. To be eligible for consideration, comments must be relevant to the effect the structure would have on aviation, must provide sufficient detail to permit a clear understanding, must contain the aeronautical study number printed in the upper right hand corner of this notice, and must be received on or before 02/09/2007.

This notice may be reproduced and circulated by any interested person. Airport managers are encouraged to post this notice.

Signature Control No: 493767-517571

(CIR)

Robert Alexander  
Specialist

Additional Information  
Part 77

Map(s)

Additional Information for ASN 2006-AEA-5282-OE

**Proposal:** To construct a(n) undefined to a height of 225 feet above ground level, 236 feet above mean sea level.

**Location:** The structure will be located 2.35 nautical miles south of TEB Airport reference point.

**Federal Aviation Regulations, FAR Part 77 Obstruction Standard(s) Exceeded:**

Section 77.23 (a) (2) by 25 feet - a height that exceeds 211 feet above mean sea level within 2.96 nautical miles of TEB.

Section 77.23 (a) (5) a height that affects an Airport Surface by penetrating Section 77.25 (b) Conical Surface by 69 feet as applied to TEB.





Federal Aviation Administration  
Air Traffic Airspace Branch, ASW-520  
2601 Meacham Blvd.  
Fort Worth, TX 76137-0520

Aeronautical Study No.  
2006-AEA-5283-OE

Issued Date: 01/03/2007

Mary R. Musca  
New Meadowlands Stadium Company, LLC  
c/o New York Football Giants  
East Rutherford, NJ 07073

**\*\* PUBLIC NOTICE \*\***

The Federal Aviation Administration is conducting an aeronautical study concerning the following:

Structure: Building (SW Corner - Stadium)  
Location: East Rutherford, NJ  
Latitude: 40-48-51.19 N NAD 83  
Longitude: 74-4-31.17 W  
Heights: 225 feet above ground level (AGL)  
236 feet above mean sea level (AMSL)

The structure above exceeds obstruction standards. To determine its effect upon the safe and efficient use of navigable airspace by aircraft and on the operation of air navigation facilities, the FAA is conducting an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77.

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION

In the study, consideration will be given to all facts relevant to the effect of the structure on existing and planned airspace use, air navigation facilities, airports, aircraft operations, procedures and minimum flight altitudes, and the air traffic control system.

Interested persons are invited to participate in the aeronautical study by submitting comments to the above FAA address or through the electronic notification system. To be eligible for consideration, comments must be relevant to the effect the structure would have on aviation, must provide sufficient detail to permit a clear understanding, must contain the aeronautical study number printed in the upper right hand corner of this notice, and must be received on or before 02/09/2007.

This notice may be reproduced and circulated by any interested person. Airport managers are encouraged to post this notice.

Signature Control No: 493768-517566

(CIR)

Robert Alexander  
Specialist

Additional Information  
Part 77

Map(s)

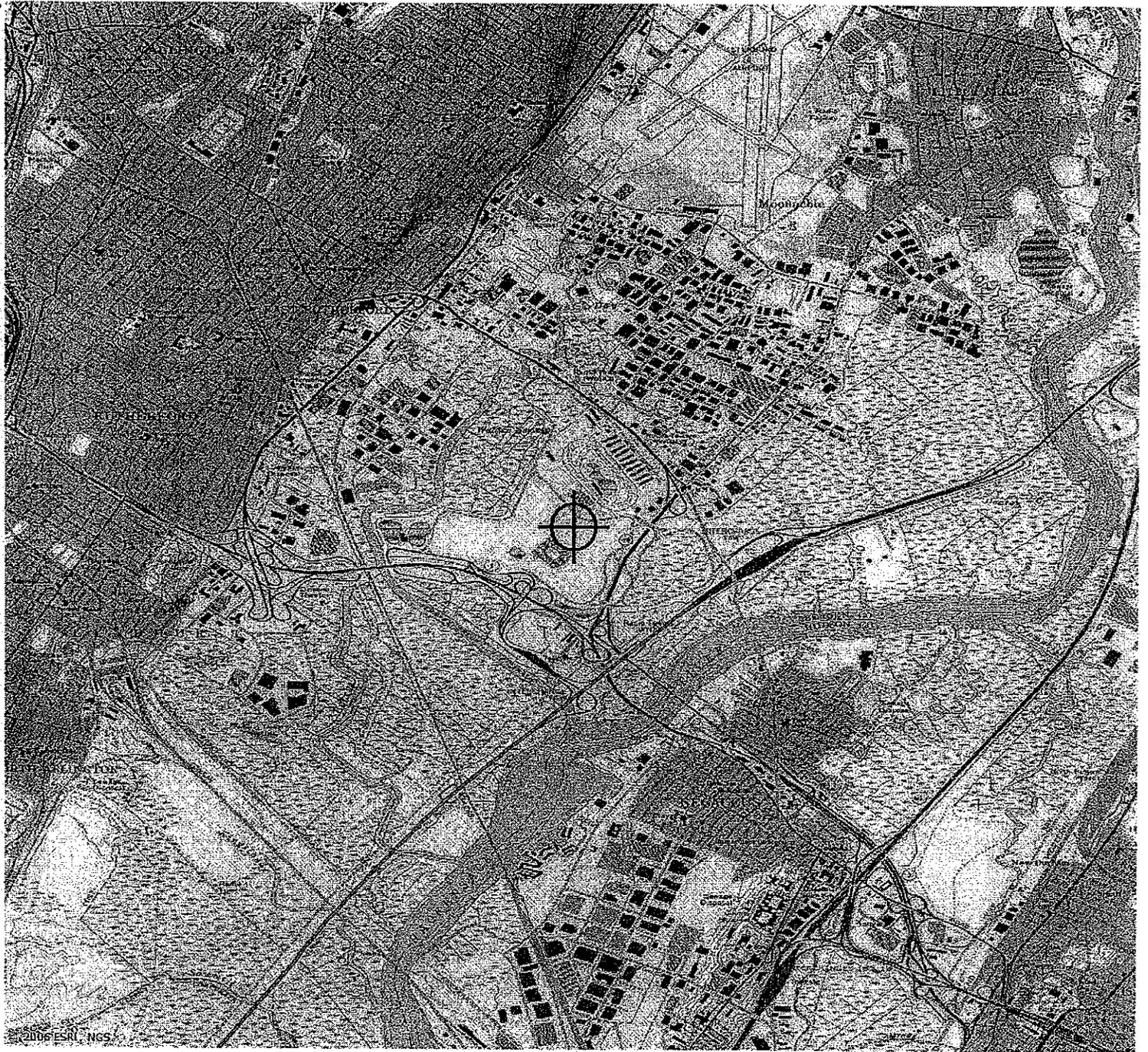
**Proposal:** To construct a(n) undefined to a height of 225 feet above ground level, 236 feet above mean sea level.

**Location:** The structure will be located 2.25 nautical miles south of TEB Airport reference point.

**Federal Aviation Regulations, FAR Part 77 Obstruction Standard(s) Exceeded:**

Section 77.23 (a) (2) by 25 feet - a height that exceeds 211 feet above mean sea level within 2.89 nautical miles of TEB.

Section 77.23 (a) (5) a height that affects an Airport Surface by penetrating Section 77.25 (a) Horizontal Surface by 77 feet as applied to TEB.



January 9, 2007

Mr. Robert Ceberio, Executive Director  
New Jersey Meadowlands Commission  
One DeKorte Park Plaza  
Lyndhurst, NJ 07071

Mr. Gary Sondermeyer, Director of Operations  
New Jersey Department of Environmental Protection  
PO Box 402  
Trenton, NJ 08625-0402

**RE: New Meadowlands Stadium Project  
East Rutherford, Bergen County  
Preliminary EIS Comments**

Dear Mr. Ceberio and Mr. Sondermeyer:

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of the Preliminary Environmental Impact Statement (PEIS) for the proposed new Meadowlands Stadium Project in East Rutherford, Bergen County. The PEIS was prepared by the New Jersey Sports and Exposition Authority (NJSEA) pursuant to the environmental review requirements of the NJDEP/New Jersey Meadowlands Commission (NJMC) "Consultation Process" of the NJSEA enabling legislation. We offer the following comments for your consideration.

#### **SOLID WASTE**

The Meadowlands Stadium Project involves replacing the old Giants Stadium, existing training facility, and existing team offices with a new modern Stadium and Giants Training Facility. The Project also proposes infrastructure improvements on the existing stadium property. Appendix B of Volume II indicates the Project site was a former wetlands that was filled with non-native material to depths ranging from 8 to 18 feet. Borings at the site documented the material to consist of soil with concrete and red brick rubble along with traces of wood pilings, plastic particles, coal fragments, ash, garbage bags, wires, piping,

rag and tape. The material is reported as historic fill as defined in N.J.A.C. 7:26E-1.8.

Further, the analytical data from the soil sampling that was conducted in the historic fill and at other locations indicates that the material shows contaminant levels exceeding the NJDEP's Non-Residential Soil Clean-up Criteria (SCC). As a remediation of the parameters exceeding the SCC, Langan Engineering has proposed a Remedial Action Work Plan including engineering controls, deed notices, and/or the removal of contaminated material and replacement with clean material as backfill.

Based on the information presented, the NJDEP's Bureau of Solid and Hazardous Waste Permitting - North concurs that the site should not be regulated as a solid waste facility and that a disruption permit is not needed for the Project development. All environmental concerns with the material can be addressed in accordance with N.J.A.C. 7:26E, the Technical Rules for Site Remediation.

## **RECYCLING**

The NJDEP's Bureau of Recycling and Planning have reviewed the Solid Waste and Recycling section of the PEIS for the Meadowlands Stadium Project and offers the following comments.

Pursuant to the provisions of the New Jersey Statewide Mandatory Source Separation and Recycling Act (Recycling Act), N.J.S.A. 13:1E-99.11 et seq., each of twenty-one counties of New Jersey developed recycling plans which mandated the recycling of certain materials. The Recycling Act also requires municipalities to adopt an ordinance based upon the recycling plan their county. Amendments to the Recycling Act established the recycling goals for each county to be 50% of the municipal waste stream and 60% of the overall waste stream. The Bergen County Utilities Authority is the designated county agency that implements the Bergen County Solid Waste and Recycling Plans.

The PEIS states that the construction phase would generate construction debris including concrete, asphalt, wood, drywall, glass, metals, and other composite materials. Construction and demolition debris is a designated recyclable material pursuant to the Bergen County Recycling Plan, and thus must be recycled to the fullest possible extent. Private recycling facilities and transfer stations exist in Bergen County and the State that could environmentally process the materials.

The PEIS also states that the Recycling Plan to be implemented for the Project will require the recycling of glass, paper, and other Class A recyclables. Aluminum cans, mixed paper, corrugated cardboard, high-grade paper, glass containers, and ferrous scrap are designated recyclable materials pursuant to the

Bergen County Recycling Plan, and thus must be recycled to the fullest possible extent. Again, private recycling facilities exist in Bergen County and the State to environmentally process this material.

The Bureau of Recycling and Planning is concerned with language presented on Page 4-54 of the PEIS, concerning current on-site solid waste management practices. The PEIS states that, "the commercial carter picks up solid waste from the stadium and takes the waste to transfer stations where recyclable materials are separated from solid waste". Materials designated as recyclable in a municipal ordinance, must be source-separated for recycling unless an exemption from the source-separation requirements of that ordinance is granted by the governing body of the host municipality, pursuant to N.J.S.A. 13:1E-99.16d. The Bureau of Recycling and Planning is not aware of the Borough of East Rutherford granting such an exemption to any hauler of solid waste servicing the Meadowlands Sports Complex. Any hauling company servicing these facilities should not continue to transport designated recyclables mixed with solid waste unless proof of an exemption, which by law may only be issued to the Sports Complex as the waste generator, is produced and supplied to the Department.

In summary, the Project developers are required to abide by and hopefully exceed the provisions of the Bergen County Solid Waste and Recycling Plans. In addition, the current solid waste management system employed by the Meadowlands Sports Complex appears to be currently in violation of State and local source-separation requirements and must be revised in order to avoid enforcement action by the NJDEP.

Please contact Ross M. Hull of the Bureau of Recycling and Planning at 609-984-5936 or by e-mail at [ross.hull@dep.state.nj.us](mailto:ross.hull@dep.state.nj.us) if you have any questions regarding the above comments.

## **AIR QUALITY**

### **Clean Air Act General Conformity**

The NJDEP's Bureau of Air Quality Planning (BAQP) has reviewed the Air Quality section of the PEIS. The BAQP's has the following comments.

On July 28, 2006, Langan Engineering and Environmental Services, an agent for the New Meadowlands Stadium Company, LLC, sent a request to the United States Army Corp of Engineers (ACOE) for a Jurisdictional Determination to confirm the absence of jurisdictional wetlands and other waters of the United States on the Project site. If the ACOE determines that there are no wetlands or other waters of the United States on the Project site, then the General Conformity requirements in Section 176 (c) of the Clean Air Act would not apply to the Project. If the ACOE determines that there are wetlands or other waters of the

United States on the Project site, then the General Conformity requirements in Section 176 (c) would apply to the portion of the Project that is covered by the ACOE permit. If General Conformity applies to a Project a General Conformity Determination would need to be completed by the ACOE.

### **Diesel Emissions**

The NJDEP's Diesel Risk Reduction Program offers the following comments on Section 4.12.2.1 (Construction Source Emissions) which states that a Diesel Emissions Management Plan will be implemented to reduce emissions from on-site construction related equipment. This plan has an emissions reduction goal of 35% of Particulate Matter (PM), which will include the mandatory use of low-sulfur diesel on construction equipment.

The Diesel Risk Reduction Program recommend that the applicant's Diesel Emissions Management Plan include the following:

- Mandatory use of ultra low sulfur diesel (15 ppm sulfur) for both on-road and non-road equipment used at the site. The use of only ultra low sulfur diesel would reduce the logistics of providing two different fuels for the Project in addition to eliminating the accidental fueling of a piece of retrofitted equipment that required ultra low sulfur diesel with only low sulfur diesel (500 ppm sulfur).
- Additional detail regarding how the 35% reduction goal will be achieved.
- A plan to reduce idling by both on-road and non-road construction equipment operating at the site.

As a point of reference, the applicant may want to consider the attached list of requirements as a way to implement the 35% reduction plan and minimize impacts of diesel emissions at the site. The General Contractor working on the Xanadu project used a version of this document. If you have any questions, please contact Bob Marcolina of the Diesel Risk Reduction Program at 609-633-7237.

### **RADIOFREQUENCY RADIATION**

The New Jersey Meadowlands region is home to a large concentration of AM radio station antennas, primarily due to its proximity to Manhattan and the high conductivity of the soil for radio waves. While constructing any structures in this area, care must be taken not to expose both workers and the public to levels of radiofrequency radiation in excess of the limits specified in N.J.A.C. 7:28-42, Radio Frequency Radiation. Even though free space electric and magnetic fields may be in compliance with the limits of Subchapter 42, metallic objects within a 1000 meter radius of AM broadcasting towers can become charged and result in contact current burns when touched. Fatalities may occur from ancillary hazards

such as falls from a startle reaction when a charged object is grasped. Metallic objects in such fields should be properly grounded.

The DEP does not have induced and contact current limits at this time. Worker health and safety can be assured by following guidance set forth in the Institute of Electrical and Electronic Engineers' IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz (IEEE Std C95.1 – 2005). OSHA also uses this consensus standard when citing violations of their General Duty Clause ("Employers shall provide work which is free of recognized hazards...likely to cause serious death or serious physical harm".) Several workers were already injured this summer at the Xanadu construction site from high radiofrequency (RF) contact currents. These incidences are still under investigation by OSHA. Therefore, the potential for RF hazards to exist at this location has been proven.

### **SUSTAINABLE COMMUNITIES AND INNOVATIVE TECHNOLOGIES**

The NJDEP's Bureau of Sustainable Communities and Innovative Technologies offers the following comments.

Page 2-19 states the following:

"As part of the Project design process, a number of design opportunities will be evaluated to potentially implement sustainable growth practices, improve environmental performance and reduce energy consumption. The options to be assessed include use of low sulfur fuels, implementation of a construction debris recycling program during construction; specification of all equipment to be non-ozone depleting; "buy local" program for materials; use of energy efficient and United States Environmental Protection Agency (USEPA) Energy-Star compliant equipment such as lighting; Direct Digital Control (DDC) and Heating, Ventilating, and Air Conditioning (HVAC) controls; waterless urinals throughout the Stadium; and low Volatile Organic Compounds (VOC) adhesives, paints and coatings, carpets, composite wood and other interior finish materials where practicable."

The incorporation of these design features is an excellent start towards the creation of a sustainable stadium. However, the Bureau of Sustainable Communities and Innovative Technologies challenges the applicant to incorporate additional sustainable design features. In the NJDEP's comments on the scope of the EIS, we provided comments encouraging the applicant to commit to building a green stadium. On the top of page 23 of the Scoping document, it was noted that "energy conservation measures will be evaluated to the extent feasible using the Leadership in Energy and Environmental Design (LEED) criteria as a guideline."

The US Green Building Council's (USGBC) LEED Green Building Rating System as a whole, not just the energy conservation measures, should be

assessed in Final EIS as a guide for all components of the Stadium Project. The new Meadowlands Stadium Project is a wonderful opportunity to showcase green development in New Jersey.

The State currently provides rebates for renewable energy through the New Jersey Clean Energy Program. See their web site for more information: <http://www.njcleanenergy.com>.

As noted on page ES-3 of the FEIS, one of the strategic goals for this Project is to "maintain the world-class status of the Meadowlands as a Sports Complex" and to improve the entertainment experience for all patrons. One way to achieve these goals is to design and build a sustainable / green stadium that rivals other stadiums in the world.

Examples of sustainable / green stadiums exist in Germany, Great Britain and Australia. Additionally, the USGBC's LEED Green Building Rating System is being applied to some stadium / training facility projects in the United States, including the Detroit Lions, Dartmouth College, University of Florida and University of Connecticut. In fact, the new Jets headquarters in Florham Park will be designed to meet the USGBC LEED standards.

Attached you will find an additional document that describes some of the green stadium projects noted above.

## **Specific Comments**

### Energy

One of the major components to a green stadium is energy efficiency and the use of renewable energy. Again, we want to note that the State currently provides incentives for energy efficiency and the best rebates for renewable energy through the NJ Clean Energy Program. See their web site for more information: <http://www.njcleanenergy.com/>.

### Methane Remediation Design

Page 4-52 outlines plans to vent methane gas. Methane is a potent greenhouse gas that contributes to global warming. As such, we would like to know if any consideration has been given to capture the methane gas for use or to flare it so that its impact on global warming is minimized. If not, we strongly encourage that this be considered.

If you need any further assistance or have any questions, especially with respect to the USGBC LEED Green Building Rating System, please contact Athena Sarafides of the Bureau of Sustainable Communities and Innovative Technologies at 609-633-1161.

Thank you for the opportunity to comment on the PEIS.

Sincerely,

Kenneth C. Koschek  
Supervising Environmental Specialist  
Office of Permit Coordination and  
Environmental Review

Attachments

## Attachment

The prime contractor(s) shall achieve a 35% reduction, at a minimum, in particulate matter (PM) emissions in their off road equipment during construction activities. This reduction shall be achieved utilizing tailpipe and/or crankcase retrofit equipment and/or alternative fuels at the discretion of the prime contractor(s). The reduction shall be calculated on a quarterly basis and be included in each quarterly report (see below).

1. All off road diesel powered construction vehicles/equipment with engine horsepower (HP) ratings of 60 HP and above, that is located at the permittee's site for a total of 30 days shall be retrofitted with Emission Control Devices. A day is considered to be any portion of a workday and the total number of days is the combination of consecutive and non-consecutive days. In addition, all motor vehicles and/or construction equipment shall comply with all pertinent State and Federal regulations relative to exhaust emission controls and safety.
2. Sixty (60) days prior to construction commencement, the prime contractor(s) shall submit to NJDEP a certified list of the diesel powered construction equipment that will be retrofitted with emission control devices. The list shall include (1) the vehicle/equipment unit number, type, make, model number, engine make, engine EPA family number, horsepower, displacement and contractor/sub-contractor name; (2) the emission control device make, model and EPA certification number.
3. The prime contractor(s) shall submit to NJDEP on a quarterly basis, a spreadsheet that includes equipment type, equipment amount, horsepower, activity hours, PM output, PM control devices and PM reduction. The initial spreadsheet shall be completed using estimates and projections. All subsequent spreadsheets shall incorporate empirical data to demonstrate the reduction of particulate matter towards the targeted goal of a minimum 35% reduction, on a quarterly basis.
4. The Emission Control Device, or retrofit equipment, shall consist of retrofit equipment control technology that is included in the USEPA or California Air Resources Board (CARB) Verified Retrofit Technology List. These lists can be found at <http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm> and <http://www.arb.ca.gov/diesel/verdev/currentlyverifiedtech.htm>, respectively. The use of this equipment, although not verified for off-road use, will be acceptable to the Department if the equipment manufacturer has approved its use in this particular equipment.
5. The prime contractor(s) shall make retrofitted vehicles available for any emissions spot testing performed by the NJDEP or its contractor.
6. Idling of delivery and /or dump trucks, or other diesel powered vehicles/equipment shall not be permitted during periods of non-active use. The prime contractor(s) shall post signs advising the vehicle operators of these idling restrictions. Idling shall be limited to 3 minutes, with the following exceptions:

January 16, 2007

- When the vehicle is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control,
- When it is necessary to operate defrosting, heating or cooling equipment to ensure the safety or health of the driver or passengers,
- When it is necessary to operate auxiliary equipment that is located in or on the vehicle to accomplish the intended use of the vehicle,
- When the outdoor temperature is below twenty degrees Fahrenheit (20 degrees F),
- When the vehicle is undergoing maintenance that requires such mobile source be operated for more than three (3) consecutive minutes,
- All work shall be conducted to ensure that no harmful effects are caused to adjacent sensitive receptors. Sensitive receptors include but are not limited to hospitals, schools, daycare facilities, elderly housing and convalescent facilities. Engine exhaust shall be located away from fresh air intakes, air conditioners and windows.

## **Sustainability Fact Sheet for Reser Stadium Expansion (Phase1) Oregon State University, Corvallis, Oregon**

Reser Stadium, located on the Oregon State University campus in Corvallis, is home to the Oregon State football team. Built in 1953, the stadium has undergone periodic renovations and additions that have not kept pace with the needs of a major NCAA Division 1-A football program.

A renovation of the east side was completed and opened for the 2005 season. This four-level, 300,000-sq.ft., \$80 million addition features new student and spectator seating, two patron clubs, 21 new private suites, concessions, restrooms, commissary, 2 public concourses, 3 elevators, 4 escalators and a 135' cantilever roof.

Sustainable strategies incorporated into the project include the following:

- Local erosion and sedimentation control standards for construction activity, more stringent than those required by the EPA's document #832-R-92-005, were utilized.
- To reduce the heat island effect from the site, standard grey concrete was used for the site's non-roof impervious surfaces.
- Light trespass from the building site is more contained than in the prior situation. Reflector systems on the field lighting fixtures reduce the off-field spill light and glare, maintaining the quality of light on the field. Fixtures located on the roof structure are concealed from view.
- Landscape mounted fixtures are provided with shields and louvers, where possible, to avoid spill light and promote the night sky policy. New full cut-off pole lights were installed in the plaza and are used only during events.
- Bicycle parking and close access to busses encourage alternative transportation usage.
- A water quality vault was provided to meet local water quality standards. This facility is capable of removing 80% of the total suspended solids and 40% of total phosphorus in storm water runoff.
- The Energy Star compliant white roof, with high emissivity and high reflectivity, will reduce solar heat gain and the air conditioning load on the building.
- A combination of high efficiency and standard irrigation technology was used in conjunction with a centrally controlled computer irrigation management system to reduce potable water consumption.
- Building systems were commissioned to ensure peak performance.
- A building automation system was used for operating and continuous monitoring of the building system for performance, trending & energy usage.
- The building will use 32% less energy than the Oregon Energy Code baseline, based on SEED analysis & energy modeling to date. Premium efficiency motors are used for HVAC equipment. A high efficiency condensing type boiler is used as the first stage of the heating sequence for energy savings. Variable speed fans are used for AC units. Hot water circulating pumps are used to service restroom sinks.
- Demand ventilation control (CO2 sensors) serve the Founder's Loge and Stadium Club, controlling the amount of outside air needed to provide proper indoor air quality.
- All A/C units over 5 tons utilize economizers, allowing the use of "free" cooling and 100% outside air when outdoor temperatures are below 72 degrees.
- Occupancy sensors were provided in private restrooms, suites and storage areas to control the lighting system.
- Local construction materials make up at least 35% of building materials, reducing transportation costs and environmental impacts.

- Recycled content building materials such as steel, carpeting, ceramic tile, and ceiling tiles were used throughout the project. It is estimated the structural steel contains 65% recycled content with 50% of that post-consumer.
- Reclaimed Douglas fir, salvaged from a building in southern Iowa, was used extensively in the Founder's Loge as an architectural element and was incorporated into custom furnishing items. The reclaimed select heart pine flooring, also used in the Founder's Loge, was salvaged from bridges constructed during the 1800's in Virginia.
- Low-emitting paints, adhesives and carpets were used to improve indoor air quality.
- All wood casework in the suites and club contain a strawboard core.
- A construction waste management plan was developed and resulted in a salvage/recycling rate that exceeded 50 percent by weight of total waste generated by the work.
- The AstroTurf field was recycled and replaced with Field Turf. The new turf is stabilized with "synthetic earth" which includes reground athletic shoe material.
- The plastic components of the seats are recyclable.

September 8, 2006

## **Results of Research on Green Stadiums**

By Athena Sarafides

First let me say that there are no LEED certified stadiums. There is one registered stadium project at Dartmouth College but I did not find any information on the project on the USGBC web site. I have called Dartmouth Facilities Planning Office twice but have not heard back from them.

There are a few LEED certified and registered projects that have athletic type facilities associated with them, e.g. training / practice facilities and locker rooms w/ offices attached. All these are also identified below.

In my search I found a number of non-LEED but still "green" stadium projects. These are described below with their associated "green" features by projects in the USA and outside of the USA (international projects).

Also, I have learned through my research and conversations with architects I know that HOK Sport, an architectural firm, seems to have the most experience when it comes to green stadium projects. Their web page is: <http://www.hok.com/sport/index.htm>.

At the end of the report I have attached some information on the wastewater treatment system used at the Solaire Apartments in New York City as an fyi. I mentioned this technology at our meeting.

Please review my findings and let me know if you have any questions or would like me to investigate some of these projects in more detail. Thanks.

### **USGBC LEED Projects**

Certified Stadiums: none to date

Certified Building – sports related:

**Detroit Lions Headquarters and Training Facility**

LEED 2.0 – *see attachment*

Registered Stadiums:

**Varsity Athletics Facility and Stadium, Dartmouth College**

LEED NC 2.2

Contact: Facilities Planning Office, (603) 646-2131

Registered Building – sports related:

**Baseball Locker Room Facility, University of Florida**

LEED NC 2.1

Contact: Bahar Armaghani, (352) 294-0080

### **The Burton Family Football Complex, University of Connecticut**

This is an indoor practice facility w/ an office building attached.

*The LEED checklist is attached.*

Contact: George Kraus, [george.kraus@uconn.edu](mailto:george.kraus@uconn.edu)

Architects: HOK

### **Other Green Stadium Projects - USA**

#### **Gillette Stadium, Foxboro, Massachusetts**

Not sure if these were proposed or incorporated, regardless still good ideas to consider.

Environmental measures in the Gillette Stadium project:

Energy saving program - The team installed a series of timing devices in the electrical distribution system that automatically shutdown all non-essential lighting after hours, thereby conserving electrical energy and lowering power consumption.

Restoration of a river - The design team proposed a solution for the restoration of a culverted river into a free-flowing riverbed and steps taken to "seed" the river bed with appropriate flora. The result was a creation of a new ecosystem that enhanced the reestablishment of wildlife into an area that was formerly asphalt paving.

On-site wastewater treatment facility - Another environmental feature proposed by the design team was the stadium's on-site wastewater treatment facility. This system allows the reuse of sanitary drainage after treatment in the form of a "gray" water supply to the thousands of water closets in the new facility.

Extensive resource management - 130,000 cubic yards of blasted open rock was processed through on-site crushers and re-used on site resulting in over 90% of the residual products were diverted from the region's shrinking landfill space.

#### **Reser Stadium Expansion, Oregon State University**

See *attached Fact Sheet* or go to: <http://oregonstate.edu/sustainability/docs/resersheet.doc>

Architects: HNTB Architecture, Inc.

#### **DC Major League Baseball Park, DC Sports & Entertainment Commission**

*Please see attached letter dated April 4, 2006, from the Chair of the Commission to the Council Chairman of the District of Columbia. In summary, the Commission is noting that they are doing all they can, within the existing budget, to build a green stadium. They note that in order to achieve LEED the budget would need to be increased.*

Within the current budget they are incorporating some of the following LEED type credits:

Sustainable Sites: Site Selection, Density & Community Connectivity, Alternative Transportation including public, bicycle storage & changing rooms, low emitting & fuel efficient vehicles, parking capacity, and stormwater quality control through the use of sand filtering.

Water Efficient Landscaping by reducing water consumption by 50% and not using potable water.

Energy & Atmosphere – use of green power.

Indoor Environmental Quality – Use of low-emitting materials in adhesives & sealants, paints & coatings, carpet systems, and composite wood & agrifiber [define]

Innovation & Design – off-season shut-down program.

### Other Green Stadium Projects - International

#### **Dartford Football Club, Kent, United Kingdom**

The UK's first sustainable football stadium is almost finished, built for Dartford Football Club in Kent. With ongoing drought conditions and a desperate need for high quality grass on the field, the architect, Urban Edge Studio, has created two lakes nearby to store rainwater for watering the grass. The average football field needs a staggering 20,000 litres of water a day to keep it looking good. The rainwater will be collected from the large flat open areas such as the plaza, artificial turf community pitch, the stadium and clubhouse roofs, and piped directly to the ponds. In an average year the ground staff should not need to take any water from the main supply to water the pitch. In a complete drought the ponds will be able to supply water for almost two months without being topped up. The lakes will make the stadium self-sufficient, look pretty, and attract local wildlife.

Because of the small size of the stadium, the architects could use sustainable building materials. The gently curving roof structure incorporates renewable, laminated timber beams, exposed timber decking and a green sedum roof cover so that it appears to merge with the surrounding landscape. Solar panels on the clubhouse roof and extensive insulation add to the overall energy efficiency. The base of the clubhouse is built in flint and brick and the upper level is clad in Siberian Larch supplied from a sustainable source. The Larch will be left untreated allowing the colour to fade and soften with age. The team is known as the "Darts" and their colours are red and white. As an added touch, white flowering cherry trees have been planted to reflect this as has a plant with the name Spirea "Darts Red"

Architects: Urban Edge Studio

#### **Arsenal Stadium, London, United Kingdom**

There are three phases to this project. The HOK Sport-designed stadium; the regeneration of Lough Road with housing by architects CZWG and a new sealed waste and recycling plant by Sheppard Robson.

#### **Green Features in Arsenal Stadium:**

- Passive and mixed mode ventilation system to minimize the use of air conditioning
- Daylight maximized through the use of skylights and high levels of fenestration
- photovoltaic solar power
- 12,000m<sup>2</sup> of green roofs, increasing thermal insulation and creating biodiversity benefits

- Minimize energy use by choosing, where practical, materials that are less energy intensive to manufacture
- Rainwater collected and stored for reuse in irrigation and toilet flushing
- Reuse and recycling all demolition waste by 70%

Architects: HOK Sport

#### **Telstra Stadium, Sydney, Australia**

- Energy management system that reduces the use of conventional electric power through measures such as natural lighting, two gas-fired co-generation engines and energy-efficient lighting
- Materials selected for their contribution to minimizing pollution, conserving resources and their durability
- Waste management and water saving measures are also in place

#### **Munich Stadium, Germany - World Cup 2006**

- Energy Conservation - Use of energy saving lamps, motion detectors in stairways and the players' area, and regulated air conditioning controlled by CO<sub>2</sub> sensors
- Reduction of excavation work in order to protect ground water
- A system allowing all rainwater to infiltrate back into the ground, permeable car parks
- Refusal to use wood from tropical forests on the stadium interior

#### **Nuremberg Stadium, Germany - World Cup 2006**

- Containers for collecting up to 1,000m<sup>3</sup> of rain water for watering the pitch areas
- Car-park surfaces treated to allow water seepage
- Water-saving sensor activated sanitary fixtures and fittings
- Centralized building services engineering to optimize the use of energy resources
- 20% reduction in the amount of waste produced
- increased use of public transportation
- During the renovation, 36 old lime trees were dug up and then re-planted after the building was finished

### **Green Wastewater Treatment Technology**

#### **Green Wastewater Treatment System Used at Solaire Apartments, NYC**

The Solaire Apartments selected ZENON's proprietary ZeeWeed® MBR (membrane bioreactor) process to treat, store and reuse the wastewater for toilet flushing, irrigation and cooling towers. This approach reduces the freshwater taken from the city's water supply by over 76% and significantly decreases energy costs as less drinking water is pumped from the city's treatment plant and wastewater is not transferred to the city's wastewater treatment system.

For more information go to:

[http://www.zenon.com/resources/case\\_studies/water\\_reuse/Solaire Apartments Battery Park.shtml](http://www.zenon.com/resources/case_studies/water_reuse/Solaire_Apartments_Battery_Park.shtml)



# United States Department of the Interior



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In Reply Refer to:

2007 FA 0050

JAN 19 2007

Mr. Robert R. Ceberio, Executive Director  
New Jersey Meadowlands Commission  
One DeKorte Park Plaza  
Lyndhurst, New Jersey 07071

Mr. Gary Sondermeyer, Operations Director  
New Jersey Department of Environmental Protection  
P.O. Box 402  
Trenton, New Jersey 08625

*Re: Preliminary Environmental Impact Statement for the New Jersey Sports and Exposition Authority's Proposed Meadowlands Stadium Project*

Dear Mssrs. Ceberio and Sondermeyer:

The U.S. Fish and Wildlife Service (Service) has reviewed the New Jersey Sports and Exposition Authority's (NJSEA) October 2006 Preliminary Environmental Impact Statement (PEIS) regarding the proposed New Meadowlands Stadium Project (Stadium Project) in East Rutherford, Bergen County, New Jersey. The Stadium Project will replace Giants Stadium with a new state-of-the-art stadium and four related ancillary components, nearly all of which are to be located within the existing footprint of the Meadowlands Sports Complex (MSC). The site of the Stadium Project is now largely developed and covered by buildings and impervious surfaces and provides little habitat value to fish and wildlife; however, the Stadium Project has the potential to contribute additional contaminants to the Meadowlands through stormwater discharge, and thus adversely affect fish and wildlife and ongoing efforts to remediate and restore the Hackensack Meadowlands ecosystem.

It appears that compensatory mitigation for the wetlands that were filled has not been implemented in accordance with federal and State permits and authorizations. Though more than 30 years old, federal and State permits and authorizations still govern use of the site. Thus, mitigation for the original wetlands' filling must be addressed. These and other concerns have been expressed in previous letters to the New Jersey Meadowlands Commission (NJMC), New Jersey Department of Environmental Protection (NJDEP), and the U.S. Army Corps of Engineers, New York District (Corps). To date, the Service has received no response addressing its concerns.

## **AUTHORITY**

Review comments on the PEIS are provided as technical assistance pursuant to the Congressional directive to the Service (P.L. 109-54 [see H.R. 109-80]) to collaborate on the restoration and protection of the Hackensack Meadowlands ecosystem. Service comments and recommendations are consistent with the intent of the Service's Mitigation Policy (*Federal Register* Vol. 46, No. 15, January 23, 1981). These comments do not preclude separate review and comment by the Service pursuant to the National Environmental Policy Act of 1969, as amended (83 Stat. 852; 42 U.S.C. 4321 *et seq.*), or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) regarding review of existing Department of the Army (DA) permit conditions for the project site or of any forthcoming application(s) for DA permits for the Stadium Project.

## **BACKGROUND**

In addition to the PEIS, the Service has reviewed Department of the Army (DA) Permit 72-009, the Corps' 1975 Statement of Findings supporting the DA permit's issuance, and the 1972 State Hearing Officers' Report and Recommendations (SHORR) in the Matter of the Hearings Held on the Proposed Sports Complex in the Meadowlands (July 10, 1972 through August 11, 1972), Hackensack, New Jersey.

The Service's August 11, 2006 letter (copy enclosed) to the NJMC and the NJDEP in response to the May 24, 2006 Public Notice and the May 2006 Scoping Document regarding the Stadium Project noted several concerns, including: (1) inconsistencies in the Scoping Document; (2) potential non-compliance of the existing MSC Project with conditions of previous State and federal permits governing use of the project site; (3) adverse project impacts on fish and wildlife species of concern, such as State-listed endangered or threatened bird species; (4) adverse (including cumulative) impacts to aquatic and other resources, such as wetland mitigation areas; (5) the control of invasive, exotic species on the project site; (6) the potential adverse effects of environmental contaminants on fish and wildlife in the Hackensack Meadowlands; (7) inadequate stormwater management on the site exacerbating contaminant effects offsite; (8) the lack of wetland buffers around the site's periphery, and (9) adverse effects of the built landscape, including communications towers, on fish and wildlife.

The Service reiterated these concerns in a subsequent letter dated October 27, 2006 (copy enclosed) to the Corps, and requested a review of the consistency of the existing MSC Project with existing permit conditions. In accordance with the August 29, 1997 Interagency Compensatory Wetland Mitigation Agreement for the Hackensack Meadowlands District, the Service also requested that the MSC Project be placed on the agenda of the next meeting of the Meadowlands Interagency Mitigation Advisory Committee (MIMAC) to provide for a review of the MSC Project's federal and State permit conditions, including the status of mitigation. To date, the Service is unaware of any review of the MSC Project by the MIMAC.

## SERVICE REVIEW

According to the PEIS, more than 95 percent of the Stadium Project site (within the MSC) is covered by impervious surfaces; most vegetated areas within the Stadium Project site consist of lawn or other landscaped areas. Thus, the Stadium Project site presently provides little habitat value for fish and wildlife. Nonetheless, the Stadium Project may adversely affect fish and wildlife, including two State-listed species (northern harrier [*Circus cyaneus*], yellow-crowned night heron [*Nyctanassa violacea*]) inhabiting surrounding wetlands, and compromise the successful remediation and restoration of the Hackensack Meadowlands due to potential contaminant effects from stormwater discharge. In addition, wetland filling for the original MSC Project has not been compensated for with mitigation. Additional information regarding these concerns and their implications are provided below.

### The Proposed Stadium Project: Potential Contaminant Effects

The Stadium Project, largely through off-site impacts, has the potential to adversely affect fish and wildlife and compromise efforts to remediate and restore the Hackensack Meadowlands ecosystem. Currently, several efforts (e.g., the NJMC- and Corps-funded *Hackensack Meadowlands Ecosystem Restoration*) are underway to remediate and restore wetland sites in the Hackensack Meadowlands.

Stormwater discharges into Berry's Creek could affect fish and wildlife using wetlands, including restored sites, throughout the Meadowlands in several ways. First, stormwater runoff from the extensive impervious surfaces of the Stadium Project has the potential to contribute substantial contamination to the Meadowlands via the stormwater lagoon system discharging into Berry's Creek. Stormwater management requirements have changed since the original development of the stormwater plan for the MSC site in the 1970s; however, stormwater management will still rely on the same lagoon system. To reduce runoff of contaminated stormwater from the Stadium Project, the Service recommends: (1) bringing the stormwater system into full compliance with the appropriate (NJMC or NJDEP) stormwater regulations; (2) modifying the lagoon system to separately trap and provide for additional treatment of the "first flush" (the initial stormwater runoff that is more polluted than runoff originating later during storm events); and (3) eliminating use of coal tars on roadways, parking lots, and other impervious surfaces. Stormwater and groundwater transport of volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs) emanating from coal tars used on parking lots are recognized as major pathways of these contaminants to urban watersheds (e.g., Mahler *et al.*, 2005). Moreover, VOCs and PAHs are recognized to have substantial adverse effects on fish and wildlife (e.g., Agency for Toxic Substances and Disease Registry, 2006).

Another off-site effect of the Stadium Project would result from any increased scour of contaminant-laden sediments in Berry's Creek by high velocity storm currents, together with the contaminants' re-suspension and subsequent tidal transport. Marshes in the vicinity of Berry's Creek are among the most contaminated wetlands in North America; thus, disturbance of those sediments has the potential to contaminate other wetlands and waterways throughout the Meadowlands ecosystem. The Service recommends that the NJSEA increase the retention

capacity of the lagoon system and take additional steps (e.g., flow diffusers) to prevent any disturbance of the contaminant-laden sediments in Berry's Creek and Berry's Creek Canal.

Finally, because some portion of the stormwater runoff will flow directly into wetlands around the periphery of the entire MSC site, the Service recommends that the NJSEA incorporate a buffer of open space (e.g., upland or wetland) between all components of the Stadium Project and adjoining wetlands. Such buffers are increasingly noted for their beneficial effects on water quality (e.g., Fischer and Fishenich, 2000) and would contribute to improved overall water quality in the Stadium Project's vicinity. Improving water quality is considered important to ensuring successful restoration of wetland ecosystems (e.g., Kentula, 2002).

### **The Original Meadowlands Sports Complex Project: Lost Wetland Functions and Uses**

The Service is also concerned by the apparent lack of mitigation for the original MSC Project, which includes the site of the Stadium Project. The Stadium Project essentially represents a modification to a portion of the original MSC Project. As stated on page 4-17 of the PEIS, "The site of the Meadowlands Sports Complex contains wetlands that were filled in the early 1970s." Federal and State permits and authorizations were required (to fill the wetlands) for the original MSC Project. Numerous statements in the 1972 SHORR (see below) clearly established both the NJSEA's intent and the NJMC's and NJDEP's requirements to improve the environment of Berry's Creek "to the end that the delicate balance of the Hackensack Meadowlands may be maintained and preserved" (as stated in N.J.S.A. 5:10-23, and reaffirmed later by the New Jersey Supreme Court in *New Jersey Sports and Exposition Authority v. McCrane, et als.*, 61 N.J. 1 [1972]).

*The forms of life present in the Berry's Creek Marsh justify its preservation. But as also indicated at numerous points, preservation is not in itself sufficient. We find it necessary for the Sports Authority to address a number of restoration and protection measures. They include the following: (pg. 20)*

*The present heavy metal concentrations which have accumulated in Berry's Creek and in the Berry's Creek Tidal Marsh pose a serious and continuing threat both to the Berry's Creek Marsh and to the Hackensack Meadowlands Wetlands and therefore should be removed. (pg. 20)*

*We make specific note in this regard of Mr. Pitney's Statement of July 25, 1972 that the Authority "is prepared and has always been prepared to take whatever steps are necessary for the management of this area." (pg. 20)*

*We find that further crossings of the Berry's Creek Tidal Marsh by roads, powerlines, sewer and water lines, fuel lines, telephone cables and the like which would further disturb the waterway network of ditches and creeks crucial to marshland productivity and food transport must at all costs be avoided. (pg. 21)*

*The Authority shall restore the Marsh using the scraping method recommended by Jack McCormick and Associates including the immobilization of toxic metals, the improvement*

*of water quality, and re-establishment of pre-1900 vegetation. The scraping method will be initiated on an experimental basis until significant positive results therefrom are manifested. If such results are determined to be negative, the scraping method shall be abandoned and other acceptable restoration methods shall be applied. (pg. 23)*

*All expenses in the acquisition, restoration, and permanent management of the Berry's Creek Tidal Marsh shall be borne by the Authority. (pg. 24)*

The Service recognizes that the compensatory mitigation required by the 1972 SHORR presented (and continues to present) substantial technical and logistical challenges due to the extensive contamination of wetlands and waterways along Berry's Creek and Berry's Creek Canal. Nonetheless, non-compliance with permit conditions and authorization requirements (*i.e.*, the failure to implement the mitigation identified in the permit or to develop appropriate alternative mitigation) has resulted in substantial losses of wetland acreage, wetland functions, and related use opportunities (*e.g.*, recreation).

Though the Stadium Project may now be confined to existing uplands, use of the MSC site was, and remains, governed by both State and federal authorizations. The Service strongly recommends that the NJSEA develop an alternative mitigation project for the Stadium Project.

#### **The Original Meadowlands Sports Complex Project: Regulatory Concerns**

The lack of mitigation for the filling of wetlands on the original MSC Project can lead to the wrong precedent; moreover, redress for the apparently unauthorized filling of wetlands appears needed under State and federal wetland regulations. The lack of mitigation is also inconsistent with interagency efforts to achieve successful restoration of the Hackensack Meadowlands (*e.g.*, the Corps' Hackensack Meadowlands Ecosystem Restoration). Furthermore, unauthorized filling of wetlands may affect future protection or make it difficult for State and federal agencies to enforce permit conditions or ensure adequate compensatory mitigation on future projects proposing wetland filling. For example, a transportation project related to the development of the MSC (*e.g.*, the Meadowlands Railroad and Roadway Improvement) also appears inconsistent with the 1972 SHORR by crossing and disturbing portions of Berry's Creek and nearby wetlands (see the quote from pg. 21 of the 1972 SHORR provided above).

The Service is trying to determine if, or how, State authorizations may have been modified since the 1972 SHORR. The 2004 State Hearing Officers' Report for the Xanadu Redevelopment Project makes note of an Environmental Liaison Committee of representatives from the NJDEP, NJMC, and NJSEA to monitor the progress of the development and ensure that the conditions of previous approvals were addressed. Since the conditions of State authorizations were (and still are) considered in federal approvals, changes to the State SHORR requirements potentially affect the status of the federal DA permits and thus require notification and subsequent review by the Corps. The Service is unaware of any notification from the permittee or the Environmental Liaison Committee to the Corps or the MIMAC regarding the status of, or specific changes to, conditions in State (*i.e.*, the 1972 SHORR) authorizations regarding the MSC site.

The Service also has been unable to determine if a Water Quality Certificate was issued for the original MSC Project or re-issued subsequent to any modification. Therefore, in order to address all of the apparent regulatory questions surrounding the original MSC Project and the Stadium Project (as a "modification" to the MSC), the Service recommends review of the status of all authorizations and permit conditions for the MSC by the MIMAC.

## CONCLUSIONS

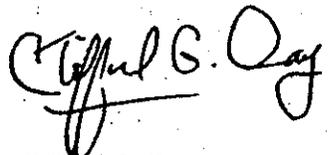
The Stadium Project has the potential to adversely affect fish and wildlife and the successful remediation and restoration of the Hackensack Meadowlands. The Service recommends that the NJSEA bring the stormwater management system into full compliance with State regulations and take additional steps to prevent disturbance of the contaminated sediments in Berry's Creek, Berry's Creek Canal, and their adjoining wetlands. The Service also recommends that the NJSEA incorporate a buffer between all components of the Stadium Project and adjoining wetlands to improve water quality in the Hackensack Meadowlands ecosystem.

Federal and State permits still apply to use of the MSC site, and thus affect the Stadium Project, State and federal regulatory programs, and collaborative programs to restore the Hackensack Meadowlands. The Service strongly encourages the NJSEA to develop and submit an alternative mitigation proposal to the MIMAC for consideration as mitigation of the Stadium Project. The Service is available to provide review and comment as more detailed mitigation plans are developed.

The Service recommends that the Environmental Liaison Committee (NJSEA, NJMC, and NJDEP) provide an update to the MIMAC regarding the condition/status of all State approvals. The Service reiterates its request that State and federal agencies review the status of all authorizations and permit conditions at the next meeting of the MIMAC.

Please contact John Staples or Stan Hales of my staff if you have any questions regarding the above Service comments. Mr. Staples and Dr. Hales can be reached at [John\\_Staples@fws.gov](mailto:John_Staples@fws.gov); [Stan\\_Hales@fws.gov](mailto:Stan_Hales@fws.gov); or at 609-646-9310 extensions 12 and 36, respectively.

Sincerely,



Clifford G. Day  
Supervisor

- Enclosures (2):
1. The Service's August 11, 2006 letter the NJMC and NJDEP
  2. The Service's October 27, 2006 letter to the Corps

## LITERATURE CITED

- Agency for Toxic Substances and Disease Registry. 2006. Toxicological Profile for Polycyclic Aromatic Hydrocarbons (PAHs) Web Page. [www.atsdr.cdc.gov/toxprofiles/tp69.html](http://www.atsdr.cdc.gov/toxprofiles/tp69.html). U.S. Department of Health and Human Services, Public Health Service, Atlanta, Georgia.
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- Kentula, M. 2002. Restoration, Creation, and Recovery of Wetlands: Wetland Restoration and Creation Web Page. [water.usgs.gov/nwsum/WSP2425/restoration.html](http://water.usgs.gov/nwsum/WSP2425/restoration.html). U.S. Department of the Interior, Geological Survey, National Water Summary on Wetland Resources, Water Supply Paper 2425, Reston, Virginia.
- Mahler, B.J., P.C. Van Metre, T.J. Bashara, J.T. Wilson, and D.A. Johns. 2005. Parking lot sealcoat: An unrecognized source of urban PAHs. *Environmental Science and Technology* 39: 5560-5566.



# United States Department of the Interior



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OCT 27 2006

In Reply Refer to:

SP-06/38

Colonel Aniello L. Tortora, District Commander  
New York District  
U.S. Army Corps of Engineers  
26 Federal Plaza  
New York, New York 10278-0090  
(Attn: Mr. Richard Tomer)

Re: Department of the Army Permit No. 72-009 (the Meadowlands Sports Complex, including the original Giants Stadium) and the proposed Meadowlands Stadium Project, East Rutherford, Bergen County, New Jersey

Dear Colonel Tortora:

The U.S. Fish and Wildlife Service (Service) requested, by copy of the enclosed August 11, 2006 letter to the New Jersey Meadowlands Commission and the New Jersey Department of Environmental Protection, that the U.S. Army Corps of Engineers, New York District (Corps) review the consistency of the original Meadowlands Sports Complex (MSC) project with the conditions of Department of the Army Permit No. 72-009 and the 1972 State Hearing Officers' Report and Recommendations regarding the MSC. The Service has not yet received a response from the Corps regarding our request for review of the above-mentioned authorizations.

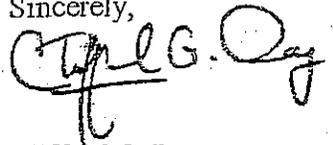
The Service remains concerned about the consistency of the original MSC project with conditions of the subject federal and State authorizations. The permit conditions of the original MSC project may apply to, and thus affect, the recently proposed Meadowlands Stadium project as well as other currently proposed projects (e.g., the Meadowlands Roadway and Railroad Improvement project). Moreover, inconsistency with, and any modifications to, the permit conditions for the original MSC project may also affect the ongoing commitments of our respective agencies to restore the Hackensack Meadowlands ecosystem. Additional Service concerns are identified in the enclosed letter.

The above concerns are pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 *et seq.*) and the Congressional directive both to the Corps and the Service (H.R. 109-80) to collaborate on the restoration and protection of the Hackensack Meadowlands ecosystem. The Service reiterates its request for: (1) a review of the consistency of the existing MSC project with existing permit conditions, and (2) identification of any previous modifications to the

original federal or State authorizations for the MSC. The Service also requests that review of the authorizations be included on the agenda of the next meeting of the Meadowlands Interagency Mitigation Advisory Committee.

We are available to meet with you at your convenience for further discussion regarding this matter. Thank you for your timely attention to this matter.

Sincerely,

A handwritten signature in black ink that reads "Clifford G. Day". The signature is written in a cursive style with a large, stylized "C" at the beginning.

Clifford G. Day  
Supervisor

Enclosure: August 11, 2006 letter to the New Jersey Meadowlands Commission and the New Jersey Department of Environmental Protection