Exelon Generation®

NP-12-0024
June 11, 2012

10 CFR 52, Subpart A

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Exelon Nuclear Texas Holdings, LLC
Victoria County Station
Early Site Permit Application
Environmental Report – Response to ER RAI Letter No.8
Docket No. 52-042

References: (1) USNRC letter to Ms. Marilyn C. Kray, Environmental Request for Additional Information Letter No.8 Related to Aquatic and Terrestrial Ecology for Victoria County Station Early Site Permit Application, dated April 27, 2012

Exelon is responding to the following questions contained in NRC Request for Additional Information (RAI) letter No.8 (Reference 1):

- ESP EIS 4.3.2-1 (eRAI No.6414)
- TE-1 (eRAI No.6427)
- TE-2 (eRAI No.6427)
- TE-3 (eRAI No.6427)
- TE-5 (eRAI No.6427)
- TE-6 (eRAI No.6427)
- TE-7 (eRAI No.6427)
- TE-9 (eRAI No.6427)
- TE-11 (eRAI No.6427)
- TE-4 (eRAI No.6428)

Exelon's responses to the above-referenced RAIs constitute a complete response to NRC RAI Letter No.8.

The RAI responses comprise Attachments 1-10. Regulatory commitments are summarized in Attachment 11. Enclosure 1 is a CD providing the supporting documents requested in RAIs TE-4 and TE-9. Enclosure 2 is a CD containing GIS files associated with the TE-4 and TE-5 responses.

If additional information is required, please contact Joshua Trembley at (610) 765-5345.

D087
NRO

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 11th day of June, 2012.

Respectfully,

Marilyn C. Kray
Vice President, Nuclear Project Development

Attachments:

(1) Response to ESP EIS 4.3.2-1 (eRAI No.6414)
(2) Response to TE-1 (eRAI No.6427)
(3) Response to TE-2 (eRAI No.6427)
(4) Response to TE-3 (eRAI No.6427)
(5) Response to TE-5 (eRAI No.6427)
(6) Response to TE-6 (eRAI No.6427)
(7) Response to TE-7 (eRAI No.6427)
(8) Response to TE-9 (eRAI No.6427)
(9) Response to TE-11 (eRAI No.6427)
(10) Response to TE-4 (eRAI No.6428)
(11) Summary of Commitments

Enclosures:

(1) CD titled "Victoria County Station, Early Site Permit Application, Part 3, Environmental Report, RAI TE-4 and TE-9 Responses, Supporting Documents, NP-12-0024, Enclosure 1, June 2012 "
(2) CD titled "Victoria County Station, Early Site Permit Application, Part 3, Environmental Report, RAI TE-4 and TE-5 Responses, GIS Files, NP-12-0024, Enclosure 2, June 2012 "

cc: USNRC, Director, Office of New Reactors/NRLPO (w/out enclosures)
USNRC, Project Manager, VCS, Division of New Reactor Licensing (w/out enclosures)
USNRC, Environmental Project Manager, VCS, Division of New Reactor Licensing (w/enclosures)
USNRC Region IV, Regional Administrator (w/out enclosures)
Argonne National Laboratory, Project Manager, VCS (w/enclosures)
EDMS

ESP EIS 4.3.2-1 (eRAI No.6414):

NRC Request:

(a) ESRP Section 4.3.2 directs the staff to review aquatic impacts from the construction of transmission lines, while Section 5.6.2 directs the staff to evaluate the aquatic impacts from the operation and management of transmission lines. American Electric Power (AEP) will be the transmission service provider for the proposed VCS. Information on AEP's procedures for constructing and maintaining transmission lines at stream and river crossings, as well as best management practices to minimize impacts to these resources or special status species that may occur within the right-of-way(s), was not provided in the ER. This information, which should be contained in AEP's procedural guideline(s), would provide the information needed for the impact analyses to be presented in the EIS. A document in Exelon's eDocs Library describes AEP's tree trimming, but does not address water body crossings or protection of special status species. Provide a copy of AEP's best management practices for construction and maintenance of transmission lines.

(b) ESRP Section 4.3.2 directs the staff to include an assessment of both onsite and offsite construction activities, including access corridor construction. The proposed rail spur connection crosses a number of streams and wetlands. Information is needed that describes the construction of this rail spur in more detail, particularly as it relates to construction over streams and wetlands and mitigative measures that would be taken to minimize construction impacts. Describe the aquatic and wetland impacts from constructing the rail spur connection and any mitigative measures associated with its construction.

Part (a) Response:

As discussed in the ER, the proposed Victoria County Station (VCS) transmission interconnection would be the responsibility of the Transmission Service Provider (TSP). The TSP would be expected to follow industry Best Management Practices (BMPs) for environmental protection during transmission construction and maintenance activities. These BMPs will minimize erosion and prevent or control sedimentation and contributions of other pollutants from land disturbance and land management activities, thus protecting the quality of surface waters and ground water. Attached is a summary of typical transmission industry BMPs (TVA 1992) that would be expected to be implemented by the responsible TSP.

References:

TVA 1992. Technical Note TVA/LR/NRM 92/1, "A Guide for Environmental Protection and Best Management Practices for Tennessee Valley Authority Transmission Construction and Maintenance Activities" November 1992

Associated ER revisions:

There are no ESPA revisions associated with the response to RAI 6414 Part (a).

Attachment to RAI 6414 Part (a) response:

Summary of Typical Transmission Industry BMPs

The basic principles of erosion and sediment control which must be considered in selecting appropriate BMPs are as follows:

- Plan clearing, grading and construction to minimize the area and duration of soil exposure.
- Maintain existing vegetation wherever and whenever possible.
- Minimize disturbance of natural contours and drains.
- Operate on dry soils when they are least susceptible to structural damage and erosion.
- Limit vehicular and equipment traffic in disturbed areas.
- Keep equipment paths dispersed or designate single traffic flow paths with appropriate road BMPs to manage runoff.
- Divert runoff away from disturbed areas.
- Provide for dispersal of surface flow that carries sediment into undisturbed surface zones that have high infiltration capacity and ground cover conditions.
- Prepare drainage ways and outlets to handle concentrated or increased runoff.
- Minimize length and steepness of slopes. Interrupt long slopes frequently.
- Keep runoff velocities low and/or check flows.
- Trap sediment on site.
- Inspect and maintain control measures on a regular basis and after significant rainfall events.
- Re-vegetate and mulch disturbed areas as soon as practical after each disturbance.

BMPs for transmission clearing, construction, re-clearing and maintenance activities can be categorized as follows: (1) pre-construction planning, (2) access road measures, (3) clearing practices, (4) construction site measures, (5) structural controls, (6) vegetative controls, (7) good housekeeping, (8) waste disposal, (9) herbicide use, (10) storm water discharge control, and (11) inspection, recordkeeping, and reporting. Some measures or controls can be used independently, others must be used jointly. Erosion and sediment controls are not limited to the following practices. However, alternative measures must be at least as effective in controlling erosion and sedimentation.

A. Preconstruction Planning

First and foremost, an erosion and sediment control/BMP/storm water control plan should be developed prior to each ground disturbing project. Preconstruction planning includes the collection and use of information about the project site and adjacent areas as well as any borrow areas and access roads. An effective preconstruction plan will consider all aspects of clearing, construction, re-clearing and maintenance activities which might cause erosion and/or water quality degradation. The plan shall identify the specific BMPs needed to minimize these adverse effects along with the proposed locations for their implementation.

The written plan must address the regulatory requirements of the respective state water pollution control department as well as any applicable federal agencies (e.g., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Services, etc.). In addition to the information required by regulatory agencies, the plan should also address the following: property boundaries; existing vegetation; soils; slopes; wetlands, ground water infiltration zones

and other sensitive resources; timing of construction (season or weather); construction approach (i.e., shear clearing, chipping, grading or fill, helicopter use); watercourses; streamside management zones; approximate location and drainage of access roads; planned temporary stream crossings; locations to spot mobile or portable fuel and oil storage tanks; installation and/or removal of water and sediment control measures; retiring access roads; re-vegetation of disturbed lands (temporary and permanent cover); and other rehabilitative measures as appropriate.

B. Access Road Measures

Proper drainage, together with proper location and construction on relatively gentle gradient, is one of the most important factors in minimizing soil movement from access roads and keeping them in serviceable condition. The goal should be to drain water off the roads as soon as possible within practical and economical limits. Several drainage structures and techniques are available. The type, number, and combination needed depends upon topography, soil types, equipment usage, and objectives for road use. Locations and types of drainage structures should be identified before road constructions begins.

1. Roads should be located as high above and as far away as possible from surface waters, wetlands, and sinkholes or other ground water infiltration zones and still perform their intended function. Where possible, locate roads near crests of ridges on gentle side slopes to ensure adequate side drainage. Avoid wet flood plain soils where good drainage is difficult to establish and maintain. To the extent possible, avoid disturbing the natural drainage system.

2. Streams shall not be used as transportation routes for vehicles or equipment. Erosion and sediment control measures must be used where the stream bank is disturbed.

3. Minimize the number of stream crossings. When necessary, cross at right angles to the streambed to minimize disturbance within and adjacent to the channel. Stream-crossing structures should be sized and installed so as not to impede fish passage (where applicable) or stream flow. Any stone or riprap placed in a stream must not negatively impact water chemistry.

4. Sloping road approaches to intermittent and perennial stream crossings should have effective water control measures installed to protect stream channels from direct surface flows. Cross drains and/or water turnouts may be used to direct surface flow away from the road or ditch and into undisturbed areas. Such diversions should be installed at least 25 feet from the stream channel to allow concentrated flows to slow and spread before entering the stream channel. Such diversions should be installed as needed at all fords, pipe culverts, or bridge crossings.

5. When possible, avoid wetlands and problem areas such as wet areas, seeps, fragile soils, steep slopes, and other areas where disturbance could result in serious problems with drainage, soil compaction, or erosion. If wetlands access is necessary, appropriate measures must be taken to minimize disturbance within the wetlands.

6. Gradient (or steepness) is a major factor in the amount of erosion that may occur on access roads. Ideally, road grades should range from 3 to 10 percent. Steeper grades of up to 20 percent may be acceptable for short distances provided adequate drainage structures are constructed. When possible, avoid constructing road sections on grades

of less than three percent as they are difficult to drain and tend to develop mud holes. Also, avoid long sustained grades by varying the degree of slope. Shortening the length of slope by breaking grade can reduce erosion by reducing the volume and slowing the speed of water flowing along the road surface.

7. Cuts, fills, and borrows should be balanced to the extent practical to minimize soil disturbance and the amount of material which must be moved. Side slopes on cuts, fills, and borrow areas should be stable and should vary in length according to the soil type present. Vertical road bank cuts in erodible material should normally not exceed five feet in height. Road bank cuts more than five feet high should be sloped to at least a 2:1 ratio and a ground cover provided to control erosion. Roads having high-cut banks should be used only when no better alternative exists. All fill material should be kept above stream flood levels and away from wetlands, wet weather conveyances and ground water infiltration zones.

8. On major truck access road entrances that intersect public highways, gravel, wooden mats, or other means should be placed on the first 100 feet of entrance to minimize mud from being carried to and deposited on the highway. Promptly clean up mud deposited on these highways at the end of the work day.

9. Temporary (overnight, weekend, and holidays) erosion and sediment control measures must be installed at the intersection of access roads with public highways or private driveways. The most effective measure to minimize sediment from being washed onto these areas during short periods of nonuse is establishing proper surface water drainage patterns on the access roads.

10. Wooden mats, constructed of undressed 2 inch x 8 inch hardwood lumber, can be used as a replacement for surface aggregate to protect culverts, bridges, and soft soils.

11. Geotextiles or fabric materials may be used to increase soil-bearing capability. Geotextiles placed under borrow or fill will reduce soil failure or deep rutting. Geotextiles reduce the thickness of base material needed, reduce deep road compaction, and allow natural flow of ground water.

12. Trim shading vegetation as needed to maximize drying of the roadbed (daylighting).

13. Use cleared materials for brush barriers or check dams along road fills or other erodible areas, but do not place them in wet weather conveyances, wetlands, streams, or sinkholes.

14. Proper road drainage should be accomplished through outsloping, insloping, crowning, dips, and culverts.

- Outsloping: Outsloping is an effective way to rapidly drain excess water from roads constructed on gentle and moderate slopes. Outsloped roads also reduce the number of other structures needed for proper drainage. Roads constructed in this manner should be outsloped toward the fill bank at the rate of 1/4-inch per foot of road width or 2 to 3 percent.
- Insloping: Roads should be insloped 2 to 3 percent on steep, sharp turns, and slippery soils as a safety measure. Drainage ditches should be constructed to collect inslope drainage, and culverts should be installed to carry drainage to the downhill side of the road.

- Crowning: Roads or road sections constructed on gently sloping or flat land should be built with a high center or crowned, and side ditches should be provided to catch water draining from the surface. Provide water turnouts or wing ditches to divert water onto the adjacent undisturbed areas.
- Dips: Dips are economical, relatively trouble free structures for providing effective drainage of access roads. Dips are considerably lower in cost than culverts; so time spent in careful construction is well justified.
    - Broad-based Dips: Use broad-based drainage dips to provide cross drainage on flat and insloped roads to prevent buildup of excessive surface runoff and subsequent erosion. Broadbased dips are usually not used on steep roads (greater than 12 percent).
    - Narrow-based Dips: Use narrow-based dips, water bars, or mound-trenches to intercept and divert surface water off the road and to minimize excessive erosion and/or gullying.
- Culverts: Use pipe culverts to carry cross road drainage on any road where storm water runoff, ditch to ditch transfer, or overland seepage might create wet areas and erosion. Above culverts, use coarse rock to slow the water velocity and prevent blockage. Below cross drain outlets, install riprap, logs, or heavy brush to function as energy absorbers and to spread water. The use of culverts should be minimized. Alteration of the natural flow of surface water usually results in a loss of biological productivity and a reduction in the scenic value of the area. Increased velocity of water flowing through pipes and manmade channels aggravates erosion, especially downstream from the site. Culverts also require frequent maintenance.

15. As soon as all construction activity has ceased, roads should be retired or "put to bed." Several steps should be taken to protect roads from erosion during periods of nonuse. Roads should be regraded and smoothed. Dips, side ditches, and turnouts should be reshaped, and sediment and debris should be removed to promote proper drainage. In order to minimize soil movement, such areas should be revegetated as quickly as possible after road construction. Consider seeding roads and banks with plants that enhance wildlife. Continue traffic control on roads to reduce erosion, sedimentation, and maintenance problems.

16. Roads not needed for maintenance purposes or landowner needs should be blocked to stop unnecessary vehicular traffic and associated land disturbance.

C. Clearing Practices

1. Clearing, grubbing, and other land disturbances must be held to the minimum necessary for the construction need.

2. Chipped woody vegetation must be uniformly spread over the cleared area or disposed of in other environmentally sound ways. No chips are to be placed inside a streamside management zone (SMZ), wetland, sinkhole or other sensitive area.

3. Where possible, trees should be felled away from and out of any surface waters, wetlands, sinkholes or wet weather conveyances. If they must be felled into those areas, they must be removed immediately and placed above high water flow or backflow, at a location where they will not be washed or floated into watercourses. Trees must be removed by hand labor or by use of a cable or low ground pressure equipment. The

removal method which causes the least amount of damage to the banks or bottom of the water body should be utilized.

4. Cutting of trees in SMZs must be accomplished using hand-held equipment or other appropriate clearing equipment such as a feller-buncher. The clearing method should be selected based on site specific conditions and topography to minimize soil disturbance and impacts to the stream or other water body. Stumps within SMZs must not be uprooted or removed.

5. Equipment crossing of streams must be at right angles and minimized to prevent further impacts.

6. Stream side vegetation that will not impact the lines, such as small mature trees or trees in ravines should not be cut (only an access path should be cut), in order to mitigate temperature and sediment runoff impacts.

7. Steps must be taken to protect all wet weather conveyances, even when they are not identified as a blue line stream on a topographic map.

D. Construction Site Measures

1. Large construction projects must be staged or phased to minimize the exposure time of cleared areas. Areas of one phase must be stabilized before another phase can be initiated. Stabilization shall be accomplished by temporarily or permanently protecting the disturbed soil surface from rainfall impacts and runoff.

2. Grading activities must be avoided to the maximum extent possible during months of highly erosive rainfall.

3. If practicable, erosion and sediment control measures must be in place and functional before earth moving operations begin. All control measures must be properly constructed and maintained throughout the construction and stabilization period.

4. Construction debris must be kept from entering surface waters, wetlands, wet weather conveyances and other types of access to existing water bodies or ground water.

5. Stockpiled soil shall be located far enough from streams, wetlands and drainage ways so that runoff cannot carry sediment downstream or into adjacent wetlands.

E. Structural Controls

1. Staked and entrenched straw bales and/or silt fences should be installed along the base of all backfills and cuts, on the downhill side of stockpiled soil, and between soil disturbance areas and any water bodies, wetlands or conveyances to them. An effective approach is to use both silt fence and straw bales together. The straw bales are to be entrenched on the upslope side of the entrenched silt fence.

2. All surface water flowing toward a concentrated construction area shall be diverted around disturbance areas using diversion dikes, berms, channels, or temporary check dams, as necessary. Temporary diversion channels must be lined (i.e., erosion control blankets or liners, riprap, etc.) to above the expected high-water level and protected by

nonerodible material to minimize erosion. Clean rock, log, sandbag, or straw bale check dams shall be properly constructed to detain runoff and trap sediment.

3. Erosion and sediment control measures shall be designed, according to the size and slope of disturbed or drainage areas, to detain runoff and trap sediment.

4. Discharges from sediment basins and traps must be through a pipe or lined channel so that the discharge does not cause erosion.

5. Muddy water to be pumped from excavation and work areas must be held in settling basins or treated by filtration prior to its discharge into surface waters or sinkholes. Dewatering discharges must be covered by a National Pollutant Discharge Elimination Permit (NPDES) permit. Water must be discharged through a pipe or lined channel so that the discharge does not cause erosion and sedimentation.

F. Vegetative Controls

The best and most cost-effective protection against soil erosion is a good vegetative cover. The role of vegetation in stabilizing soils and protecting watersheds is universally recognized. Vegetation dissipates the energy of rain and slows the movement of runoff water. Roots and organic matter hold the soil in place. Vegetation tends to increase water movement through the soil, thus reducing runoff. Existing vegetation, particularly on steep slopes and in natural drains, should be protected.

1. A streamside management zone (SMZ) or filter/buffer strip of vegetation must be left along both sides of perennial and intermittent streams and other water bodies.

2. Unnecessary canopy removal along streams, in wetlands, and around springs and sinkholes or other infiltration zones must be avoided. When necessary, trees and shrubs should be cut so that they fall away from the stream. It is recommended that at least 50 to 75 percent of the low canopies (under 15 feet mature height) shading the stream be left to maintain normal water temperatures.

3. Trees and/or shrubs located in hollows, valleys, down slope side hills, or other topographic low spots that do not interfere with construction needs, safety considerations, operations, or maintenance (danger trees) must remain undisturbed. This also applies to visually sensitive or recreation areas.

4. Preconstruction vegetative ground cover should not be destroyed, removed, or disturbed more than 20 calendar days prior to grading or earth moving.

5. Temporary soil stabilization with annual vegetation or other appropriate cover material shall be initiated as soon as practicable on all disturbed areas, including roads, where construction activities have temporarily (less than 21 days) or permanently ceased.

6. Permanent soil stabilization with perennial vegetation shall be applied to all disturbed areas at the earliest opportunity after soil disturbance activities have permanently ceased.

G. Good Housekeeping

BMPs will also minimize the movement of many pollutants other than sediments. Those pollutants that are mixed in solution or are carried on fine grained sediments may pass through all BMPs and eventually reach downstream water bodies. Materials such as petrochemicals are nearly impossible to control once they are present in runoff water. The only practical control option available is to prevent these pollutants from reaching runoff or flood waters through the use of proper application techniques and good housekeeping practices. Control of petrochemical runoff, such as oils, gasoline, and greases involves the use of BMPs since these materials adhere to, or coat sediment particles. Additional control practices are as follows:

1. Used oil, grease, and rags must be disposed of in proper receptacles and kept out of contact with rainfall or runoff water.

2. The dumping of waste materials, including any used petrochemical containers, at the site is prohibited.

3. Liquid and solid waste must be collected in containers and regularly transported from the site to sanitary landfills.

4. Equipment repairs and washing must be undertaken at specific locations (i.e., away from surface waters, drains and sinkholes).

5. All on-site vehicles must be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage.

6. Any petroleum products, paints, or chemicals present at the site must be stored in tightly sealed containers which are clearly labeled and are properly stored when not in use.

7. Mobile or portable oil storage tanks should be positioned or located to prevent spilled oil from reaching water courses. A secondary means of containment, such as dikes or catchment basins, should be furnished for the tank(s). The tank(s) should be located where it will not be subjected to periodic flooding or washout.

8. Spill response equipment and sufficient absorbent material to contain and clean up fuel or chemical spills or leaks must be maintained onsite or be readily available. Spills of paint, chemicals, oil, etc. must be immediately cleaned up, and contaminated soil and absorbent materials must be promptly removed and placed into appropriate waste containers. The wastes must then be properly characterized in order to determine the required method of disposal. Solid wastes may be removed and disposed in an approved landfill. Special or hazardous wastes must be managed by appropriate permitted facilities according to all applicable regulations.

H. Waste Disposal

Waste Materials: All trash and construction debris from the site will be hauled to an approved landfill. No construction waste material will be buried or burned on-site. Clearing debris (brush and timber) may be burned on-site in accordance with local fire regulations. Employee waste and other loose materials will be collected and properly disposed of so as to prevent the release of floatables during runoff or flood events. Liquid wastes will be properly collected in a DOT-approved container onsite. An environmental engineer will be designated to characterize the waste and coordinate and

manage the disposal with the appropriate permitted facilities according to applicable regulations.

Hazardous Waste: In general, hazardous wastes are not expected to be generated or encountered in these projects. However, the hazardous materials used do present the potential for hazardous waste generation (e.g., painting/stripping, chemical spills, fuel spills). In the event that hazardous waste is encountered or generated, all wastes will be properly collected, managed and disposed according to EPA, state and/or local regulations. An environmental engineer will be designated to support any events.

Sanitary Waste: Portable sanitary units will be provided for use by all workers throughout the life of construction projects. All sanitary waste will be regularly collected from the portable units by a licensed sanitary waste management contractor.

I. Herbicide Use
Herbicides are sometimes used on stumps and low growing brush during right-of-way clearing and more often during maintenance. All alternatives to herbicide use should be considered and implemented when possible (e.g., landowner maintenance, livestock grazing). Herbicides can be liquid, granular, pellets, or powder and can be applied aerially or by ground equipment and may be selectively applied or broadcast depending on the site requirements, species present, and condition of the vegetation. Water quality considerations include measures taken to keep herbicides from reaching streams whether by direct application or through runoff of or flooding by surface water. "Applicators" must be trained, licensed and follow manufacturers' label instructions, EPA guidelines, and respective state regulations and laws.

1. If herbicide use is deemed necessary, their potential adverse impacts must be considered in selecting the compound, formulation, and application method. Conditions that contribute to the offsite migration of a herbicide should be avoided. For example, a herbicide that is hand applied in pelletized form can be very mobile and adversely impact non-target areas, e.g., picloram is very mobile in water.

2. Herbicides that are designated "Restricted Use" by the Environmental Protection Agency require application by or under the supervision of applicators certified by the respective state control board. They also require detailed records of application developed on a timely basis.

3. Knowledge of the chemical being used and adherence to the manufacturer's specifications and directions are essential to the protection of water quality. The label contains information regarding applicator safety; species for which the chemical is registered; the application rate or concentration; appropriate weather conditions during application; environmental impacts; and proper container disposal. Material Safety Data Sheets provide toxicological data that are available from the chemical manufacturer.

4. Transportation regulations for herbicides must be followed. Accidents that result in spillage must be promptly reported to proper authorities and immediately cleaned up.

5. Disposal of herbicide containers must be in accordance with directions given on the label.

6. Herbicide containers or applicator equipment must never be cleaned in or near streams, water bodies, or ground water infiltration zones.

7. Mixing of herbicides must be done with care to avoid spillage and to ensure that excessive amounts of chemicals are not being applied.

8. Application equipment will be properly maintained and adjusted to prevent spillage and excessive application of vegetation control materials. Frequent inspection and calibration of equipment is recommended.

9. Aerial application and ground application of liquid, granular, pellet, or powder formulations will be done in accordance with the following guides:

- The sites to be treated should be selected and the application directed by the appropriate TSP official (i.e., contract administrator, Right-of-way Program Administrator, or line foreman).
- A preflight walking or flying inspection must be made within 72 hours prior to applying herbicides aerially. This inspection should ensure that no land use changes have occurred, that sensitive areas are clearly pointed out to the pilot, and that proper buffer zones are maintained.
- Aerial application of liquid herbicides normally will not be made when surface wind speeds exceed five miles per hour, in areas of fog, or during periods of temperature inversion.
- Pellet application normally will not be made when the surface wind speeds exceed ten miles per hour, or on frozen or water saturated soils.
- Liquid application will cease when the temperature reaches 95 degrees (F) or above.
- Application during unstable, unpredictable, or changing weather patterns will be avoided.
- Equipment and techniques will be used that are designed to ensure maximum control of the spray swath with minimum drift.
- Under no circumstances will herbicides or fertilizers be applied to the surface of water bodies, wetlands or ground water infiltration zones unless specifically labeled for aquatic use. Filter and buffer strips must conform at least to federal and state regulations and any label requirements. The use of aerial or broadcast application of herbicides is not allowed in any SMZ (200 feet minimum width) adjacent to perennial streams, ponds, and other water sources. Hand application of certain herbicides may be labeled for use within SMZs; however, they should be used only selectively.
- Buffers and filter strips (200 feet minimum width) are required next to agricultural crops, gardens, farm animals, orchards, apiaries, horticultural crops, and other valuable vegetation.
- During all ground applications, the applicator should periodically calibrate the application equipment to ensure that the herbicide is being applied at the proper rate.
- Herbicides used for stump treatments and tree growth regulators must be applied according to the specimen label.
- Herbicides are not to be applied in the following areas or times:
    - On lawns or within 300 feet of a residence.
    - Around trees that would fall and hit a conductor or support structure.
    - In areas highly visible from interstates and other heavily traveled roads or scenic locations and high-use recreational areas.
    - In fence rows and other areas where cattle might eat wilted cherry leaves.

- In city, state, and national parks or forests or other special areas without written permission and/or required permits from the proper governmental officials.
- Off the right-of-way.
- Without permission of the property owner on property leased or rented.
- During rainy periods or during the 48-hour interval prior to rainfall predicted with a 20 percent or greater probability by local forecasters (this applies when soil-active herbicides are used).
- In areas where soil erosion might occur or soil might be mechanically relocated (this applies when soil-active herbicides are used).

10. Accurate and up-to-date records are to be maintained concerning the plan for and the application of all herbicides. The locations, herbicide applied, amount of herbicide applied, application method, and the size of the area treated are to be recorded.

J. Storm Water Discharge Management

All potential sources of pollution which could affect the quality of storm water discharges must be identified, and the appropriate control measures must be implemented to ensure that the following conditions are met both during and after construction activities:

1. There shall be no distinctly visible floating scum, oil, or other matter contained in the storm water discharge.

2. The storm water discharge must not cause an objectionable color contrast in the receiving stream.

3. The storm water discharge must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, fish, or aquatic life in the receiving stream.

I. Inspection, Recordkeeping, and Reporting

1. Regular maintenance is vital to the success of an erosion and sediment control system. All control measures shall be checked and repaired as necessary. Checks shall be made in dry periods and following rainfall events as required under the state construction storm water permit.
During prolonged rainfall, daily checking and repairing is necessary. Discharge monitoring and stream sampling may be required to verify there is minimal site sediment contribution to water bodies.

2. Records must be kept on all checks and repairs to erosion and sediment control measures. These records are to be maintained on site or at a nearby office. A chronological pictorial record is recommended as well as the written record of inspections.

3. Inspection records and information resulting from water quality monitoring activities required by state regulations must be retained for a minimum of three (3) years, or longer if requested by the respective state water pollution control department.

Part (b) Response:

The proposed rail spur is described in ER Subsection 3.9.1.3. Figure 1 and Figure 2 identify the wetland and linear water feature areas, respectively, that could potentially be affected by VCS construction. From these figures, it can be seen that the potential permanent rail spur disturbance of wetlands and streams not anticipated to be impacted by other site construction activities is limited to two portions of wetland Wb1 and two sections of stream Sa15. Locations and descriptions of wetland Wb1 and Sa15 can be found in the VCS wetland delineation report (Tetra Tech 2010), which was submitted via Exelon letter NP-12-0006, dated February 15, 2012 (ML12079A233). No additional temporary or permanent disturbance would be expected from rail spur construction. The acreages and linear feet of potential wetland and water feature impacts associated with rail spur construction are included in the total values presented in Table 1 of Exelon's response to RAI TE-5.

As discussed in ER Subsection 4.3.2, Exelon would use Texas Commission on Environmental Quality (TCEQ)-recommended best construction management practices (BMPs) to control erosion and limit the amount of soil and sediment-laden water entering potentially affected wetlands and waterways. Erosion control and stabilization practices could include, but would not be limited to: mulching, geotextiles, sod stabilization, flow diversion and velocity dissipation devices (e.g., check dams), buffer strips, and establishment of temporary or permanent vegetation. Sediment controls could include silt fences, vegetative buffer strips, sediment traps, and sediment basins, as appropriate and as dictated by site conditions. Slope stabilization measures could include erosion control blankets, turf reinforcement mats, rip-rap, seeding, and mulch logs, as warranted by site conditions.

When conducting work in wetland areas, wetland mats and board roads could be used if feasible and warranted by field conditions. Wetland disturbance would be limited to the area required to safely and efficiently perform the work, with undisturbed portions of the wetland temporarily demarcated (e.g., by signage or high visibility fence) to limit encroachment. Materials and equipment would be staged in upland areas.

ER Subsection 4.3.2.3 describes stream crossing techniques – open cut or "dry" crossings - that would be employed during construction of the raw water makeup system intake pipelines across small intermittent and ephemeral water features. Similar techniques and concepts would be used for rail spur crossings, where applicable. In some cases, as in where the current flow path of a water feature is through the proposed cooling basin area, the existing intermittent / ephemeral drainage features will be permanently rerouted. In these instances, the sequence of construction and BMP installation would be selected to minimize impacts (e.g., crossing a swale after the upstream portion has been rerouted). In the few instances where the rail spur would cross water features that would not be rerouted, Exelon would design the crossing using best engineering practices, such that erosion around the inlets and outlets of culvert pipes or other conveyance structures would be minimized. Plans for rerouting upgradient swales, as well as detailed engineering for rail and pipeline crossings, would be conducted at the COL stage of the project.

Subsection 4.3.2 also discusses the development of a construction-phase Spill Prevention, Control, and Countermeasures (SPCC) Plan and a Stormwater Pollution Prevention Plan (SWPP) to address prevention and mitigation of potential petroleum and stormwater runoff water quality impacts, respectively. Additional discussion on the

development and implementation of environmental control and monitoring plans is presented in ER Section 3.9.

Considering the relatively minor extent of wetland and stream impacts associated with rail spur construction and the construction controls and BMPs that would be implemented, Exelon concludes that water quality, aquatic life, and wetland impacts associated with rail spur construction would be SMALL.

References:

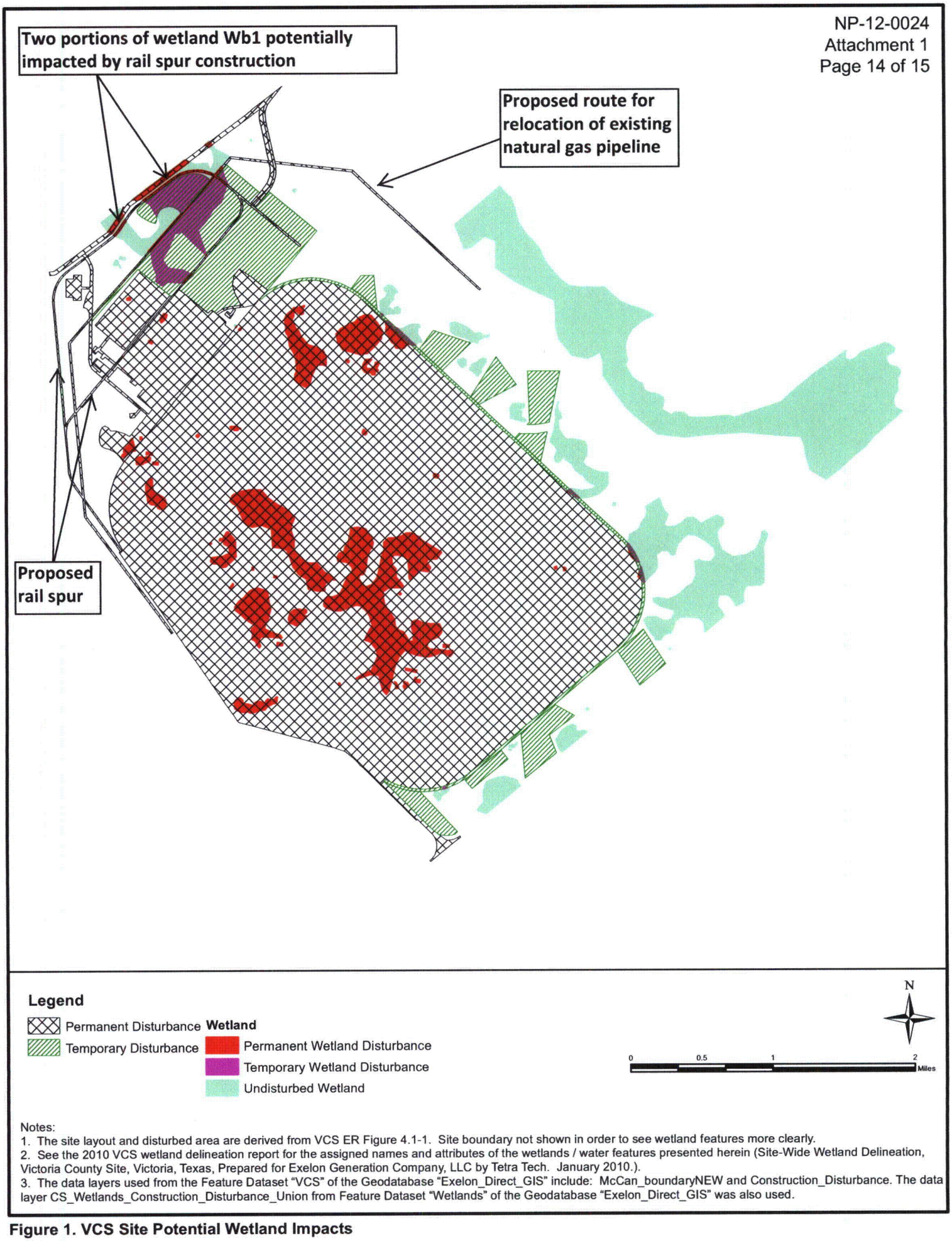
Tetra Tech 2010. *Site-Wide Wetland Delineation, Victoria County Site, Victoria, Texas*, Prepared for Exelon Generation Company, LLC by Tetra Tech, January 2010.

Associated ER revisions:

The first paragraph of ER Subsection 4.3.2 will be revised as shown in a future ESPA revision to indicate that the discussion of water quality best management practices applies to construction of the proposed rail spur:

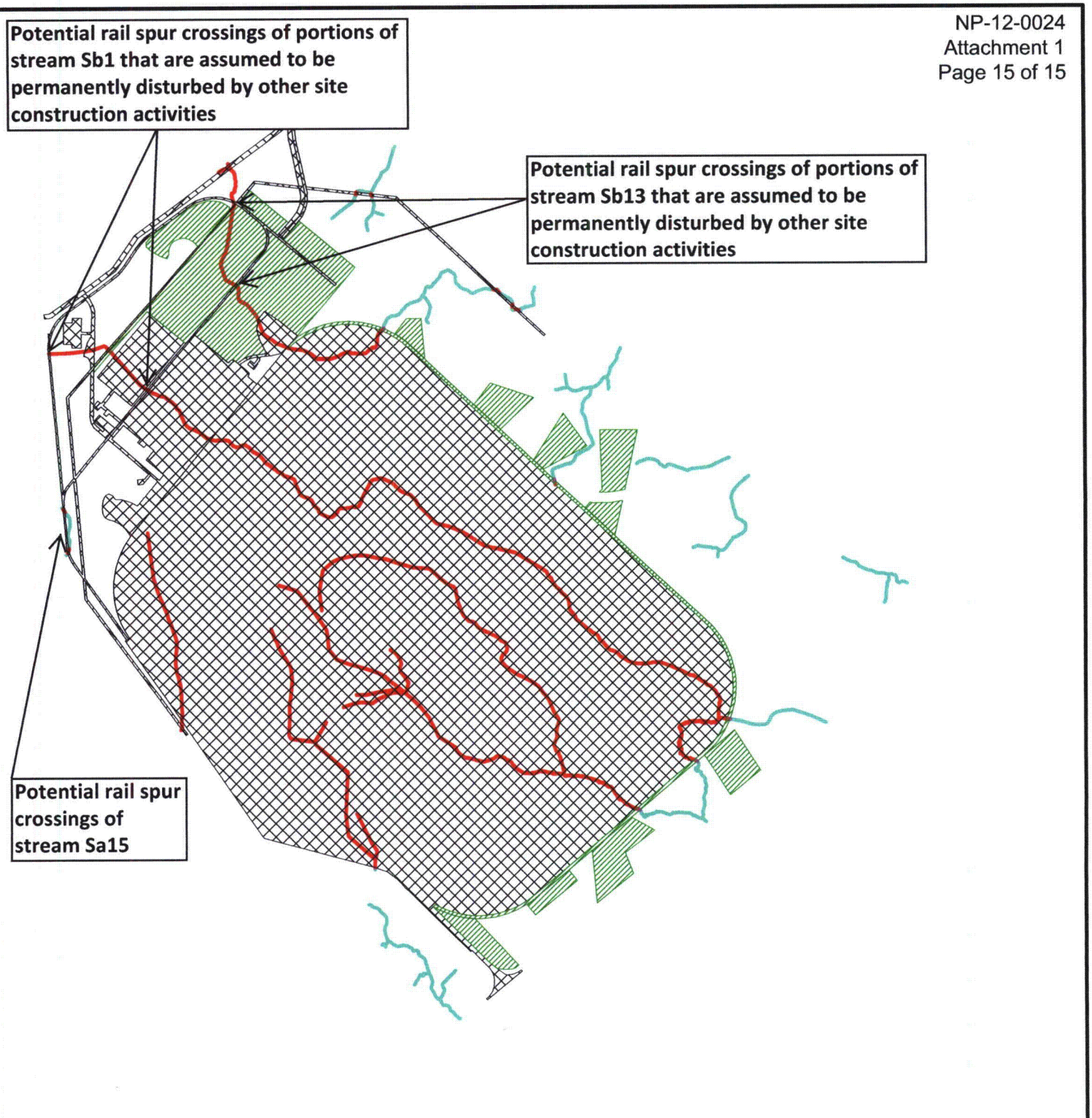
4.3.2 Aquatic Ecosystems

Subsection 2.4.2 describes the aquatic communities potentially affected by development of the VCS site. Section 3.9 describes proposed site preparation and construction activities that could potentially affect local ecological communities. Activities would include clearing, grubbing, and grading of upland areas of the site; creation of a construction access road to U.S. Highway 77; development of an onsite road system; relocation of three existing gas lines that cross portions of the property; construction of a rail spur to link the powerblock area to the existing rail line adjacent to the southern border of the site; installation of temporary utilities; development of construction security facilities; creation of construction parking and laydown areas; construction of temporary office buildings, warehouses, shop, and fabrication areas; and installation of permanent underground utilities. Many of these activities would take place in upland areas and would be carried out in such a way as to preclude, under normal circumstances, impacts to local wetlands, intermittent and perennial streams, ponds, Linn Lake, and the Guadalupe River. Subsection 4.3.1 assesses the potential impact of these site preparation and construction activities on terrestrial communities.



Notes:
1. The site layout and disturbed area are derived from VCS ER Figure 4.1-1. Site boundary not shown in order to see wetland features more clearly.
2. See the 2010 VCS wetland delineation report for the assigned names and attributes of the wetlands / water features presented herein (Site-Wide Wetland Delineation, Victoria County Site, Victoria, Texas, Prepared for Exelon Generation Company, LLC by Tetra Tech. January 2010.).
3. The data layers used from the Feature Dataset "VCS" of the Geodatabase "Exelon_Direct_GIS" include: McCan_boundaryNEW and Construction_Disturbance. The data layer CS_Wetlands_Construction_Disturbance_Union from Feature Dataset "Wetlands" of the Geodatabase "Exelon_Direct_GIS" was also used.

Figure 1. VCS Site Potential Wetland Impacts



Notes:
1. The site layout and disturbed area are derived from VCS ER Figure 4.1-1. Site boundary not shown in order to see stream features more clearly.
2. See the 2010 VCS wetland delineation report for the assigned names and attributes of the wetlands / water features presented herein (Site-Wide Wetland Delineation, Victoria County Site, Victoria, Texas, Prepared for Exelon Generation Company, LLC by Tetra Tech. January 2010.).
3. The data layers used from the Feature Dataset "VCS" of the Geodatabase "Exelon_Direct_GIS" include: McCan_boundaryNEW and Construction_Disturbance. The data layer VCSTopoStreams_Identify_modify_disturbance from Feature Dataset "Wetlands" of the Geodatabase Exelon_Direct_GIS" was also used.

Figure 2. VCS Site Potential Stream Impacts

ESP TE-1 (eRAI No.6427):

NRC Request:

TE-1 ESRP Sections 2.4.1 and 4.3.1 direct the staff to describe each habitat type and evaluate temporary and permanent impacts. Habitat acreages, including site totals and broken out by proposed permanent and temporary impacts, are needed for a thorough description of the resources on the site as well as a detailed evaluation of potential impacts of the project. Provide acreages for all habitat types occurring at the VCS site, as well as the acreages of each habitat type occurring within the proposed permanently and temporarily affected areas.

Response:

Environmental Report (ER) Figure 2.4-1 depicts the habitat types found on the Victoria County Station (VCS) site. Table 1 provides the site acreage and the potential disturbed acreage for these habitat types. The disturbed acreage is categorized as permanent or temporary based on the construction disturbance areas shown on ER Figure 4.1-1 in Exelon's response to TE-5. Live Oak Motte habitat located in the area denoted for spoils at the north end of the VCS site was categorized as undisturbed. Exelon would take measures to avoid disturbance in that area. Live Oak Motte habitat located within or adjacent to the proposed cooling basin was categorized as permanently disturbed.

Table 1. Habitat Types on the VCS Site

Habitat type	Site Acreage	Approximate Disturbed Acreage	
		Permanent	Temporary
Bluestem Grassland	10,565	5930	844
Bottomland Hardwood Forest	437	0	0
Live Oak Forest	388	3	0
Live Oak Motte	10	6	4
Water	132	0	0
Total	11,532	5939	848

Associated ESPA Revisions:

There are no ER changes associated with this response.

ESP TE-2 (eRAI No.6427):

NRC Request:

TE-2 ESRP Section 2.4.1 directs the staff to describe each habitat type. The ER describes the various habitats on the site. Identification of the dominant plant species is needed to effectively characterize each of these habitat types. Identify dominant plant species that occur in each of the habitat types, by stratum.

Response:

Wildlife surveys of the Victoria County Station (VCS) site conducted in 2008 included identification of vegetation communities and habitat types (BIO-WEST 2008). Documentation of the wildlife surveys is being provided in response to TE-9 of RAI 6427. Four habitat types were identified in addition to wetlands[1]. These included Bluestem Grassland, Bottomland Hardwood Forest, Live Oak Forest and Live Oak Motte. The following provides a description of each habitat type.

Bluestem Grassland

The Bluestem Grassland was the dominant habitat type on the VCS site. This habitat type occurred on mostly level to rolling terrain supported by sandy loam to clay soils. Based on discussions with the local area biologist and observations in the field, it was evident that this bluestem grassland habitat type is diligently managed. Management practices implemented within this grassland included prescribed burns, livestock grazing rotation, and mechanical clearing of encroaching woody vegetation. Together these efforts result in a grassland community in various stages of vegetational succession. The grassland community descriptions were combined to describe the grassland as a whole and includes dominant species observed throughout.

The Bluestem Grasslands were composed of open grasslands intermixed with woody vegetation occurring in varying degrees of density. The herbaceous layer was dominated by little bluestem (*Schizachyrium scoparium*), big bluestem (*Andropogon gerardii* var. *gerardii*), yellow Indiangrass (*Sorghastrum nutans*) and Pan American balsamscale (*Elyonurus tripsacoides*) along with southern dewberry (*Rubus trivialis*), western ragweed (*Ambrosia psilostachya*), tickseed coreopsis (*Coreopsis tinctoria*), wooly croton (*Croton capitatus*), pink evening primrose (*Oenothera speciosa*) and cone flower (*Rudbeckia hirta*). Woody species are intermixed in some of the grasslands and consist of young specimens of honey mesquite (*Prosopis glandulosa*) and huisache (*Acacia farnesiana*).

Bottomland Hardwood Forest

The Bottomland Hardwood Forest occurred at the base on an escarpment that separated the Guadalupe River flood plain and upland grassland prairie. This habitat type occurred along the northeastern portion of the property adjacent to Linn Lake. Soils within this habitat type consisted of clays with varying inclusions of sand. This area

[1] Wetland delineation surveys of the VCS site were performed in 2008 and 2009. The results of the wetland delineation are the basis for the wetland habitat shown on Environmental Report Figure 2.4-1.

appears to experience intermittent flooding as evident by debris lines identified at the time of the 2008 field effort.

Dominant tree species that occurred in this area consisted of sugar hackberry (*Celtis laevigata*), green ash (*Fraxinus pennsylvanica*), pecan (*Carya illinoensis*) and American elm (*Ulmus americana*). Adjacent to Linn Lake other more mesic species occurred including black willow (*Salix nigra*) and bald cypress (*Taxodium distichum*). The shrub layer was relatively open and consisted of palmetto (*Sabal minor*), yaupon (*Ilex vomitoria*) and buttonbush (*Cephalanthis occidentalis*). The herbaceous layer in the bottomland hardwood forest was sparse in areas of dense canopy cover. Vegetation within these areas was dominated by climbing hemp vine (*Mikania scandens*), pepper vine (*Ampelopsis arborea*) and sedges (*Carex* spp.). Adjacent to Linn Lake in areas with greater light penetration, the herbaceous layer was more dense and consisted of seacoast sumpweed (*Iva annua*), poison ivy (*Toxicodendron radicans*) along with those species found under the canopy.

Live Oak Forest

The Live Oak Forest habitat type occurs along the upper escarpment of the Guadalupe River bottom between the Bluestem Grassland and the lower Bottomland Hardwood Forest. Because many of the same woody vegetation species occurred in both the Hardwood Bottomland and Live Oak Forest, these habitat types were distinguished by elevation and the lack of hydrophytic vegetation. The Live Oak Forest occurs on gently sloping to undulating terrain underlain by sandy loam soils. The undulating terrain is a result of small incised drainages that lead down-slope to the bottomland.

As suggested by the name of this habitat type, live oak trees dominated this woodland. Other less common tree species that were identified included American elm, coma (*Bumelia lanuginosa)* and honey locust (*Gleditsia triacanthos*). The shrub layer was dominated by palmetto and yaupon. The forest floor possessed an abundance of leaf litter along with dominant herbaceous species of greenbrier (*Smilax bona nox*), poison ivy, peppervine and seedlings of the overstory species.

Live Oak Motte

A few intermittent stands of Live Oak Mottes occur within the Bluestem Grasslands. These mottes are represented by isolated dense stands of live oak trees typically occupying less than 5 acres. Soils identified within these live oak mottes were typically a sandy loam. These areas appear to be highly utilized by livestock and deer exhibiting a distinct browse line and disturbed understory. Vegetation within the Live Oak Mottes consists of an overstory monoculture of live oak trees reaching heights of up to 30 feet. The shrub strata density varies depending on the individual oak motte, but includes species of yaupon, American beautyberry (*Callicarpa americana*) and Jerusalem cherry (*Solanum pseudo-capsicum*). The herbaceous layer is dominated in leaf litter with random vines of poison ivy, pepper vine, greenbrier and Virginia creeper (*Parthenocissus quinquefolia*) along with a few young sedges.

Reference:

BIO-WEST 2008. *Herpetological and Small Mammal Survey, Exelon Victoria County Site, Located Near McFaddin in Victoria County, Texas*, Prepared for Tetra Tech NUS by BIO-WEST, Inc., June 2008.

Associated ESPA Revisions:

There are no ER changes associated with this response.

ESP TE-3 (eRAI No.6427):

NRC Request:

TE-3 ESRP Sections 2.4.1 and 4.3.1 direct the staff to describe each habitat type. The ER describes the land cover types for the raw water intake line routes. However the reference source for the information is needed for the EIS. Similar land cover types for the canal route and pump house are also needed for a complete description of the environment and analysis of impacts. Provide habitat type data for raw water intake line, discharge line, and heavy haul road. Provide land cover types for the canal route and pump house.

Response:

Environmental Report Section 2.2.2 and Table 2.2-3 provide land use/land cover (LU/LC) information for the offsite areas associated with the proposed Victoria County Station (VCS). Land use/land cover data in the area of the VCS site was obtained from the National Oceanic and Atmospheric Administration (NOAA), generated as part of the Coastal Geospatial Data Project (NOAA 2000). Land use was mapped and coded using the Anderson LU/LC classification system.

Raw Water Makeup (RWMU) Intake Structure and Canal

ER Section 2.2.2.4 indicates the intake structure and canal would occupy approximately 39 acres, all of which is classified as cropland and grassland using the Anderson LU/LC system.

Intake Pipelines

ER Section 2.2.2.4 and Table 2.2-3 provide acreages by Anderson LU/LC category for the three RWMU intake pipeline routes. The route and LU/LC information are shown on ER Figure 2.2-5.

Blowdown Pipeline

ER Section 2.2.2.4 and Table 2.2-3 provide acreages by Anderson LU/LC category for the blowdown pipeline route. The route and LU/LC information are shown on ER Figure 2.2-5.

Transportation Corridor

The Victoria County Navigation District (VCND) transportation corridor would link the Port of Victoria, located at the terminus of the Victoria Barge Canal, to U.S. Highway 77. The proposed project would include improvements to the existing barge offload facility at the Port of Victoria. Planned improvements include a new barge dock and barge parking or storage area. The VCND transportation corridor has independent utility from the proposed VCS and is evaluated for potential cumulative impacts in ER Sections 4.7 and 5.11. Exelon would construct an onsite heavy haul road connecting the powerblock area to the VCND transportation corridor. The transportation corridor and LU/LC information are shown on ER Figure 2.2-4. The LU/LC information for the proposed route is summarized below.

Table 1. Transportation Corridor Land Use

Land Use category	Acres
Agricultural Land	
Cropland and pasture	8.4
Rangeland	
Shrub and Brush Rangeland	2.5
Mixed Rangeland	1.3
Forestland	
Mixed Forestland	85.0
Water	
Stream and Canals	4.7
Wetland	
Forested Wetland	19.5
Nonforested Wetland	14.8
Barren Land	
Strip Mines, Quarries, and Gravel Pits	4.9
Total	141.0

Exelon has not completed field surveys of the offsite areas. Habitat types were identified using regional vegetation information. In addition, Figures 1 and 2 indicate the offsite areas on aerial photographs showing the current land cover.

The state of Texas is divided into 10 distinct vegetation areas (TPWD 2012). The VCS site and associated offsite areas occur entirely within the Gulf Coast Prairies and Marshes vegetation area. This vegetation area encompasses a narrow strip approximately 60 miles wide, of lowlands adjacent to and along the Texas coast from the Louisiana border to Brownsville near the Mexican border. The region is divided into Gulf Coast Prairies further inland from Gulf Coast Marshes bordering the coast.

The RWMU intake structure and canal, intake pipeline routes, blowdown discharge pipeline, and transportation corridor are located in the Gulf Coast Prairies and Marshes vegetation area. Gulf Coast Prairies have slow surface drainage and elevations that range from sea level to 250 feet. These areas include nearly level and virtually undissected plains. Originally the Gulf Coast Prairies were composed of tallgrass prairie and post oak savannah. However, tree species such as honey mesquite, and acacia, along with other trees and shrubs have increased in this area forming dense thickets in many places. Typical oak species found in this area include live oak (*Quercus virginiana*) and post oak (*Q. stellata*), in addition to huisache (*Acacia smallii*), black-brush (*A. rigidula*), and a dwarf shrub; bushy sea-ox-eye (*Borrichia frutescens*). Principal climax grasses of the Gulf Coast Prairies include gulf cordgrass (*Spartina spartinae*), indiangrass (*Sorghastrum nutans*), and big bluestem (*Andropogon gerardii* var. *gerardii*). Prickleypear (*Opunita*) are common within this area along with forbs including asters (*Aster* sp.), poppy mallows (*Callirhoe* sp.), bluebonnets (*Lupinus* sp.), and evening primroses (*Oenothera* sp.).

Figure 1. Offsite Area Photograph - Transportation Corridor and Blowdown Pipeline

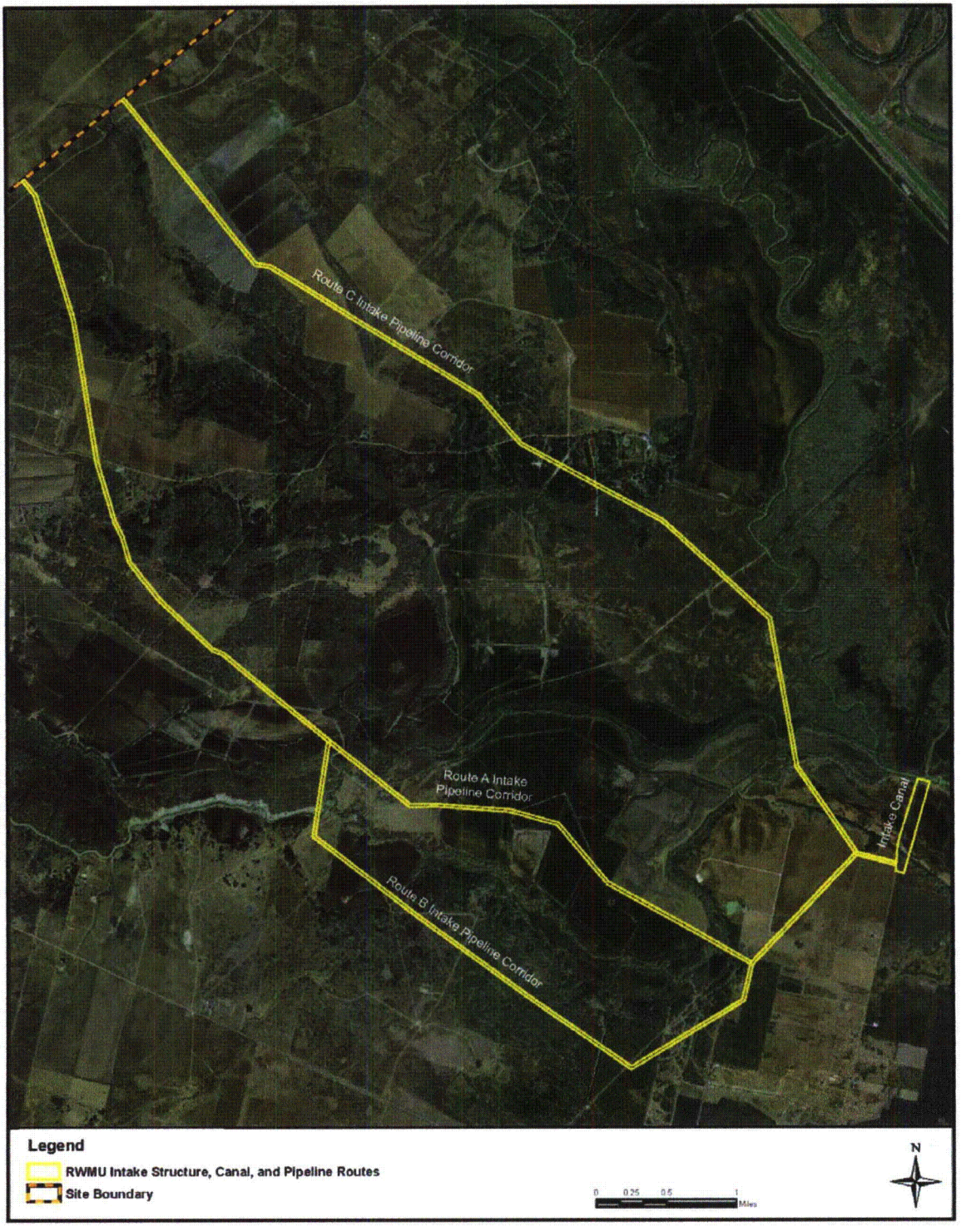


Figure 2. Offsite Area Photograph - RWMU Intake Structure, Canal and Pipeline Routes

RWMU Intake Structure and Canal

River water would be diverted into the intake canal located on the southwest side of the Guadalupe River. The RWMU pumphouse would be located on an escarpment above the flood plain. The area is primarily cropland and pasture with a forested area along the escarpment where the pumphouse would be located.

Intake Pipelines

Photos 1 through 5 are representative of the vegetation encountered along the RWMU intake pipeline routes. Horizontal direction drilling (HDD) would be used at major stream crossings.

Photo 1. Representative Upland Conditions Encountered Along Pipeline Routes

Photo 2. San Antonio River at HDD Pipeline Crossing – Route A

Photo 3. Elm Bayou at HDD Pipeline Crossing – Route A

Photo 4. San Antonio River at HDD Pipeline Crossing – Route B

Photo 5. Elm Bayou and San Antonio River at HDD Pipeline Crossing – Route C

Blowdown Pipeline/Transportation Corridor

As discussed in ER Section 2.4.1.3.2, the transportation and blowdown line corridor traverse habitats similar to those described for the bottomland portions of the VCS site, including an overstory of ash and other hardwoods and an understory of saw palmetto in the less disturbed areas. Photos 6 through 10 are representative of the vegetation encountered along the transportation corridor and blowdown pipeline route. The transportation corridor would cross bottomland habitats, including wetlands identified in the National Wetlands Inventory (USFWS undated). The presence of wetlands would be expected to be confirmed by the VCND during future transportation corridor permitting activities.

Photo 6. View of Transportation Corridor Route from Northeast Corner of VCS Site

Photo 7. View of Transportation Corridor Route from VCS Site, Moving East

Photo 8. View of Transportation Corridor Route, Moving Toward the Guadalupe River

Photo 9. View of Transportation Corridor Route at Guadalupe River Crossing and Blowdown Discharge Location

Photo 10. Photo 10. View of Transportation Corridor Route Termination and Proposed Barge Offload Facility Location at Port of Victoria Turning Basin

References:

NOAA (National Oceanic and Atmospheric Administration). 2000. *Land Use/Land Cover (1990-urban-enhanced) Digital Geography.* Coastal Geospatial Data Project. Available from http://coastalgeospatial.noaa.gov/data_gis.html.

Texas Parks and Wildlife Department (TPWD). 2012. Plant Guidance by Ecoregions. Available at: http://www.tpwd.state.tx.us/huntwild/wild/wildscapes/guidance/plants/ecoregions/. Accessed on May 7, 2012.

USFWS undated. US Fish and Wildlife Service, National Wetland Inventory Map, online wetland mapper. Available at: http://107.20.228.18/Wetlands/WetlandsMapper.html. Accessed May 24, 2012.

Associated ESPA Revisions:

There are no ER changes associated with this response.

ESP TE-5 (eRAI No.6427):

NRC Request

TE-5 ESRP Sections 2.4.1 and 4.3.1 direct the staff to describe each important habitat type and evaluate temporary and permanent impacts. The specified acreages are needed for a detailed evaluation of potential impacts of the project. Quantify wetlands that would be in potential permanent and temporary impact areas.

Response:

Prior to summarizing the potential temporary and permanent wetland and water feature impacts associated with VCS construction, Exelon updated ER Figure 4.1-1 to reflect revised limits of construction disturbance. Primarily, the soil stockpile areas depicted to the south and east of the cooling basin were broken into smaller areas and relocated to avoid direct wetland impacts to the extent practicable. Revised ER Figure 4.1-1 is provided in the Associated ESPA Revisions section of the response, as is revised ER Table 4.1-1 presenting the updated construction disturbance acreages.

Exelon completed a wetland survey for the VCS site in March and April 2009. The associated wetland delineation report (Tetra Tech 2010) was submitted via Exelon letter NP-12-0006, dated February 15, 2012 (ML12079A233). Subsequent to Exelon's field delineation activities, the U.S. Army Corps of Engineers (USACE) completed a preliminary jurisdictional determination (PJD) to unofficially determine the limits of wetlands and waters under the agency's Clean Water Act jurisdiction. PJD activities identified two wetlands, NWI1 (9.41 acres) and Wb17 (0.34 acres), not included in the 2009 Exelon delineation. The addition of these wetlands raised the unofficial wetlands acreage on the VCS site to approximately 1853 acres. The largest of the delineated wetlands is an approximately 770-acre lacustrine and palustrine forested wetland complex adjacent to Linn Lake that would not be disturbed by VCS construction activities. Table 1 summarizes potential temporary and permanent impacts to wetlands and water features, based on the construction disturbance footprint shown in revised Figure 4.1-1.

As discussed in ER Subsection 2.4.1.2, the field evaluation of wetlands occurred during unusually dry conditions, which led to a reliance on soil indicators for wetlands delineation. Given the reliance on a single wetland criterion, it is possible that the extent of wetlands was overestimated during field activities. Additionally, of the 62 wetlands identified during field survey activities, 42 were determined by Exelon to be isolated wetlands with no noticeable surface water connection. To aid the NRC and the USACE in evaluating potential wetland impacts at the VCS site, Exelon is preparing a preliminary wetlands functions and values assessment. The goal of this study is to evaluate the current ability of wetlands at the VCS site to provide environmental and social wetland functions and values. Exelon will provide the preliminary functions and values assessment to the NRC prior to August 31, 2012.

Table 1. VCS Potential Wetland and Linear Water Feature Disturbance

Wetlands		
Total onsite wetlands[1,2]	1853	acres
Permanent wetland disturbance[3]	515	acres
Permanently disturbed PJD wetlands[3]	512	acres
Temporary wetland disturbance	127	acres
Temporarily disturbed PJD wetlands	127	acres
Linear Water Features		
Total onsite linear water features	147,059	linear feet
Permanent linear feature disturbance	95,453	linear feet
Temporary linear feature disturbance	598	linear feet

Table 1 Notes

1. Per Exelon's 2009 VCS site wetland delineation (Tetra Tech 2010).

2. Wetlands Wb17 (0.34 acres) and NWI1 (9.41 acres) were identified during completion of the US Army Corps of Engineers (USACE) Preliminary Jurisdictional Determination (PJD; USACE 2011) subsequent to completion of Exelon's 2009 wetland delineation. These wetlands are included in the reported wetland acreage. Wb17 and NWI1 are shown on Figure 4.1-1.

3. The reported acreage includes wetlands Wb17 and NWI1, identified during completion of the USACE PJD (USACE 2011). Approximately 3 acres identified in Exelon's wetland delineation were not included as Clean Water Act jurisdictional in the USACE PJD (USACE 2011). See Note 2 above.

References:

Tetra Tech 2010. *Site-Wide Wetland Delineation, Victoria County Site, Victoria, Texas*, Prepared for Exelon Generation Company, LLC by Tetra Tech, January 2010.

Enclosures:

GIS files for the revised construction disturbance footprint and the VCS site wetlands are provided on the CD in Enclosure 2.

Associated ESPA Revisions:

Changes to the following ESPA sections, tables, and figures will be incorporated in a future revision of the ESPA to reflect: 1) the addition of two wetlands identified during USACE PJD activities; 2) the revised construction disturbance footprint; and 3) updated potential wetland impact acreages:

- SSAR Section 2.4.1.2.5
- SSAR Figure 2.4.1-9
- ER Section 2.2.1.1
- ER Table 2.2-1
- ER Section 2.3.1.1.5
- ER Figure 2.3.1-11
- ER Section 2.4.1.2
- ER Figure 2.4-1
- ER Figure 2.4-2
- ER Section 3.1.5
- ER Table 3.1-1
- ER Figure 3.1-9 (deleted in favor of a reference to ER Figure 4.1-1; deletion not shown below)
- ER Section 3.3.1.1
- ER Section 3.9.1.8
- ER Figure 3.3-3 (deleted in favor of a reference to ER Figure 2.3.1-1; deletion not shown below)
- ER Section 4.1.1.1
- ER Table 4.1-1
- ER Figure 4.1-1
- ER Section 4.2
- ER Section 4.3.1.1
- ER Section 4.3.1.1.1
- ER Section 4.3.1.1.2
- ER Section 4.3.2.1
- ER Table 4.3-1
- ER Section 4.4.2.2.5
- ER Section 4.6
- ER Table 4.6-1
- ER Table 4.6-2
- ER Section 4.7.1
- ER Table 4.7-2
- ER Section 5.1.1.1
- ER Table 5.10-1
- ER Section 5.11.1
- ER Section 5.11.3.1
- ER Table 5.11-3
- ER Section 6.5.1.1
- ER Section 10.1.1
- ER Table 10.1-1
- ER Table 10.1-2
- ER Section 10.2.1.1
- ER Section 10.2.1.3
- ER Section 10.3.1

SSAR Chapter 2 Changes

The first two paragraphs of SSAR Subsection 2.4.1.2.5 will be revised as follows:

2.4.1.2.5 Wetlands

A wetland survey conducted by Exelon for the VCS site between March and April 2009, indicated that before construction, 62 areas, totaling ~~1843.42~~ approximately 1843 acres, meet the criteria for designation as wetland in accordance with the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Reference 2.4.1-14). The designated wetland areas are shown in Figure 2.4.1-9. Wetland Wb13/14 has a surface area of 245.42 acres and represents the largest wetland outside of the Wp1 wetland complex (769.75 acres) associated with Linn Lake. Other sizeable wetlands include Wa6 (38.51 acres), Wa7 (10.64 acres), Wa8 (18.95 acres), Wa9 (10.92 acres), Wa16 (41.88 acres), Wa17 (10.68 acres), Wa20 (36.71 acres), Wa44 (11.63 acres), Wb1 (207.16 acres), Wb5 (~~25.68~~ 25.67 acres), Wb7 (12.97 acres), Wb12 (50.01 acres), Wb15 (222.21 acres), and Wb16 (88.92 acres). The remaining delineated wetlands each occupy less than 10 acres.

Of the 62 wetlands, 42 were determined by Exelon to be isolated wetlands with no noticeable surface water connection. The U.S. Army Corps of Engineers (USACE) completed a preliminary jurisdictional determination (PJD) for the potential VCS disturbance area to unofficially determine the limits of wetlands and waters under the agency's Clean Water Act jurisdiction. PJD activities identified two wetlands, NWI1 (9.41 acres) and Wb17 (0.34 acres), not included in the 2009 Exelon delineation. The addition of these wetlands raised the unofficial wetlands acreage on the VCS site to approximately 1853 acres. The extent to which the surveyed wetlands fall within federal jurisdiction will be officially determined via an approved USACE jurisdictional determination (JD) during completion of the permitting activities at the COL stage. Two major classes of wetland systems occur on the VCS site; palustrine (freshwater), and lacustrine. A primarily lacustrine wetland (Wp1), with a palustrine forested component, associated with Linn Lake accounts for 769.75 acres (41.8 percent) of the total designated wetlands, and palustrine unconsolidated bottom and palustrine unconsolidated shore wetland systems account for 4.01 acres (0.2 percent) of total designated wetlands. The remaining 1069.66 acres (58.0 percent) of the designated wetlands are palustrine emergent wetland systems.

SSAR Figure 2.4.1-9 will be revised as follows:

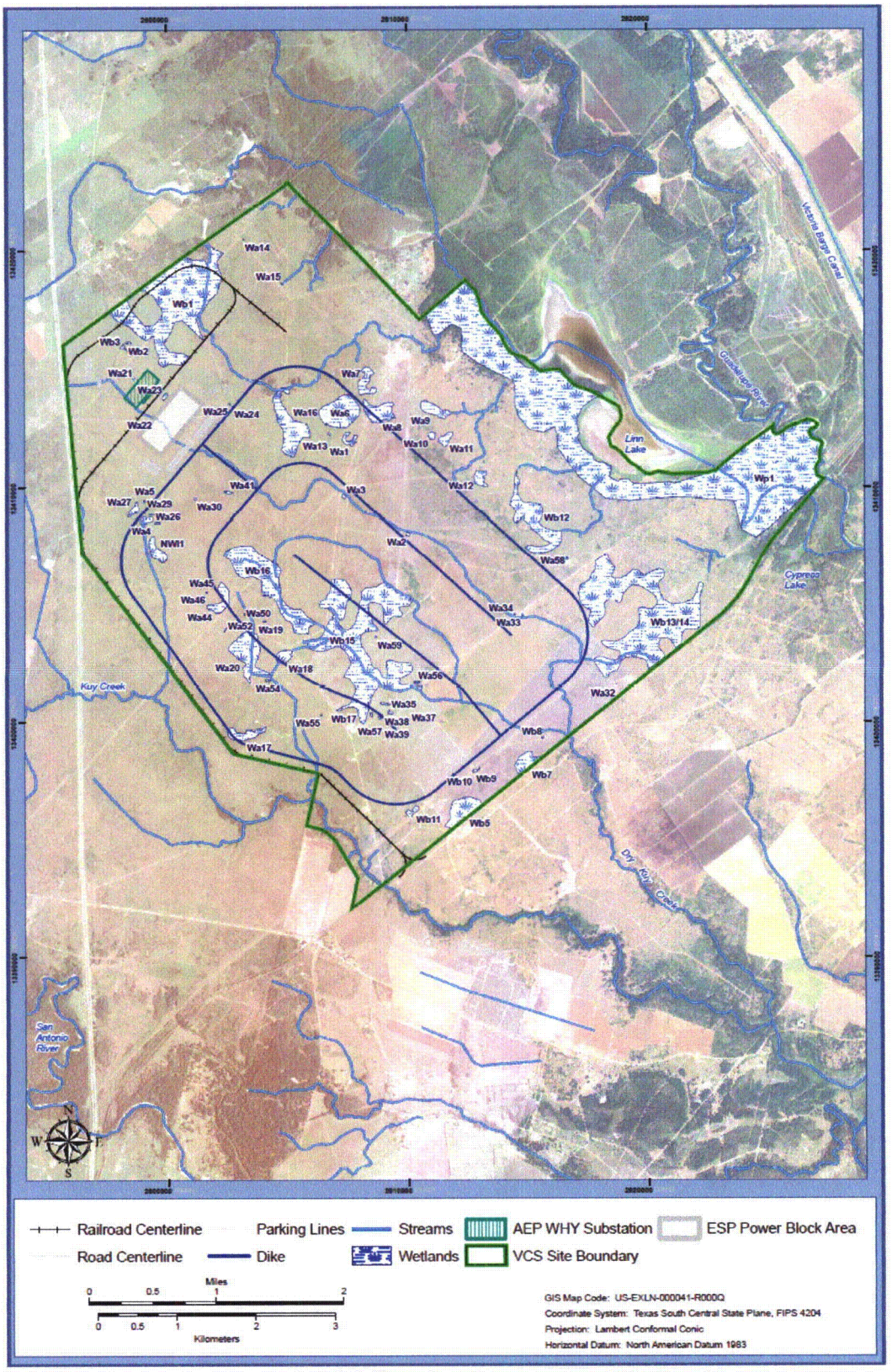


Figure 2.4.1-9 Existing Streams and Wetlands

ER Chapter 2 Changes

The second full paragraph of ER Section 2.2.1.1 on page 2.2-2 will be revised as follows:

The wetlands within the site are located primarily in the floodplain of the Guadalupe River, near the eastern site boundary. Exelon performed a wetland delineation of the site and found 62 individual wetland areas totaling approximately 1843 acres. The US Army Corps of Engineers (USACE) subsequently identified two additional wetlands during PJD activities, raising the total onsite wetland acreage to approximately 1853 acres. Approximately 770 acres of this total occur along Linn Lake and are well outside the area expected to be disturbed (Figure 2.2-1). For the remainder of the site outside of the Linn Lake area, 42 wetlands totaling 139 acres were determined to be isolated based on field surveys. Sections 2.4.1 and 4.3.1 address wetlands and wetland impacts in more detail.

ER Table 2.2-1 will be revised as follows:

Table 2.2-1
Site and Vicinty Land Use (Acres)

Land Use Category		Site[a]	Vicinity
Urban or Built-up Land			
Residential		0	36
Industrial		0	463
Mixed Urban or Built-up Land		0	8
	Total	0 (0%)	507 (0.7%)
Agricultural Land			
Cropland and Pasture		10	13,499
Confined Feeding Operations		0	143
Other Agricultural Land		0	58
	Total	10 (0.1%)	13,700 (19%)
Rangeland			
Herbaceous Rangeland		0.92	2060
Shrub and Brush Rangeland		~~9,451~~9,441	31,693
Mixed Rangeland		0	51
	Total	~~9,452~~9,442 (82%)	33,804 (47%)
Forestland			
Deciduous Forestland		91	2834
Evergreen Forestland		0	808
Mixed Forestland		3.1	13,957
	Total	94 (0.8%)	17,599 (24.5%)
Water			
Streams and Canals		0	348
Lakes		132	33
Reservoirs		0	268
	Total	132 (1.1%)	649 (0.9%)
Wetland[b][c]			
Isolated Wetlands		139	2450
Adjacent Wetlands		~~1,704~~1,714	2879
	Total	~~1,843~~1,853 (16%)	5,329 (7.4%)
Barren Land			
Sandy Areas Other than Beaches		0	4
Transitional Areas		0	345
	Total	0 (0%)	349 (0.5%)
Total		11,532	71,936

(a) Site land use values are a combination of NOAA Anderson Level 1 and 2 Land Use/Land Cover and wetlands data collected in a site-wide wetland delineation. There is no land use code for wetlands data because the data was collected during the wetlands delineation and does not correspond directly to the Anderson Level 2 characterization.

(b) The designation of "isolated" and "adjacent" are based on Exelon field observations, ~~and have not been verified by USACE~~

(c) Wetlands NWI1 and Wb17 identified during USACE PJD activities have been included in the "Adjacent Wetlands" category.

The first and second paragraphs in ER Subsection 2.3.1.1.5 will be revised as follows:

2.3.1.1.5 Wetlands

A wetland survey conducted by Exelon for the VCS site between March and April 2009, indicated that before construction, 62 areas, totaling ~~1843.42~~ approximately 1843 acres, meet the criteria for designation as wetland in accordance with the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (USACE 2008). The designated wetland areas are shown in Figure 2.3.1-11. Wetland Wb13/14 has a surface area of 245.42 acres and represents the largest wetland outside of the Wp1 wetland complex (769.75 acres) associated with Linn Lake. Other sizeable wetlands include Wa6 (38.51 acres), Wa7(10.64 acres), Wa8 (18.95 acres), Wa9 (10.92 acres), Wa16 (41.88 acres), Wa17 (10.68 acres), Wa20 (36.71 acres), Wa44 (11.63 acres), Wb1 (207.16 acres), Wb5 (~~25.68~~ 25.67acres), Wb7 (12.97 acres), Wb12 (50.01 acres), Wb15 (222.21 acres), and Wb16 (88.92 acres). The remaining delineated wetlands each occupy less than 10 acres.

Of the 62 wetlands, 42 were determined by Exelon to be isolated wetlands with no noticeable surface water connection. The U.S. Army Corps of Engineers (USACE) completed a preliminary jurisdictional determination (PJD) for the potential VCS disturbance area to unofficially determine the limits of wetlands and waters under the agency's Clean Water Act jurisdiction. PJD activities identified two wetlands, NWI1 (9.41 acres) and Wb17 (0.34 acres), not included in the 2009 Exelon delineation. The addition of these wetlands raised the unofficial wetlands acreage on the VCS site to approximately 1853 acres. The extent to which the surveyed wetlands fall within federal jurisdiction will be officially determined via an approved USACE jurisdictional determination (JD) during completion of the permitting activities discussed in Section 1.2, at the COL stage. Two major classes of wetland systems occur on the VCS site; palustrine (freshwater), and lacustrine. A primarily lacustrine wetland (Wp1), with a palustrine forested component, associated with Linn Lake accounts for 769.75 acres (41.8 percent) of the total designated wetlands, and palustrine unconsolidated bottom and palustrine unconsolidated shore wetland systems account for 4.01 acres (0.2 percent) of total designated wetlands. The remaining 1069.66 acres (58.0 percent) of the designated wetlands are palustrine emergent wetland systems.

ER Figure 2.3.1-11 will be revised as follows:

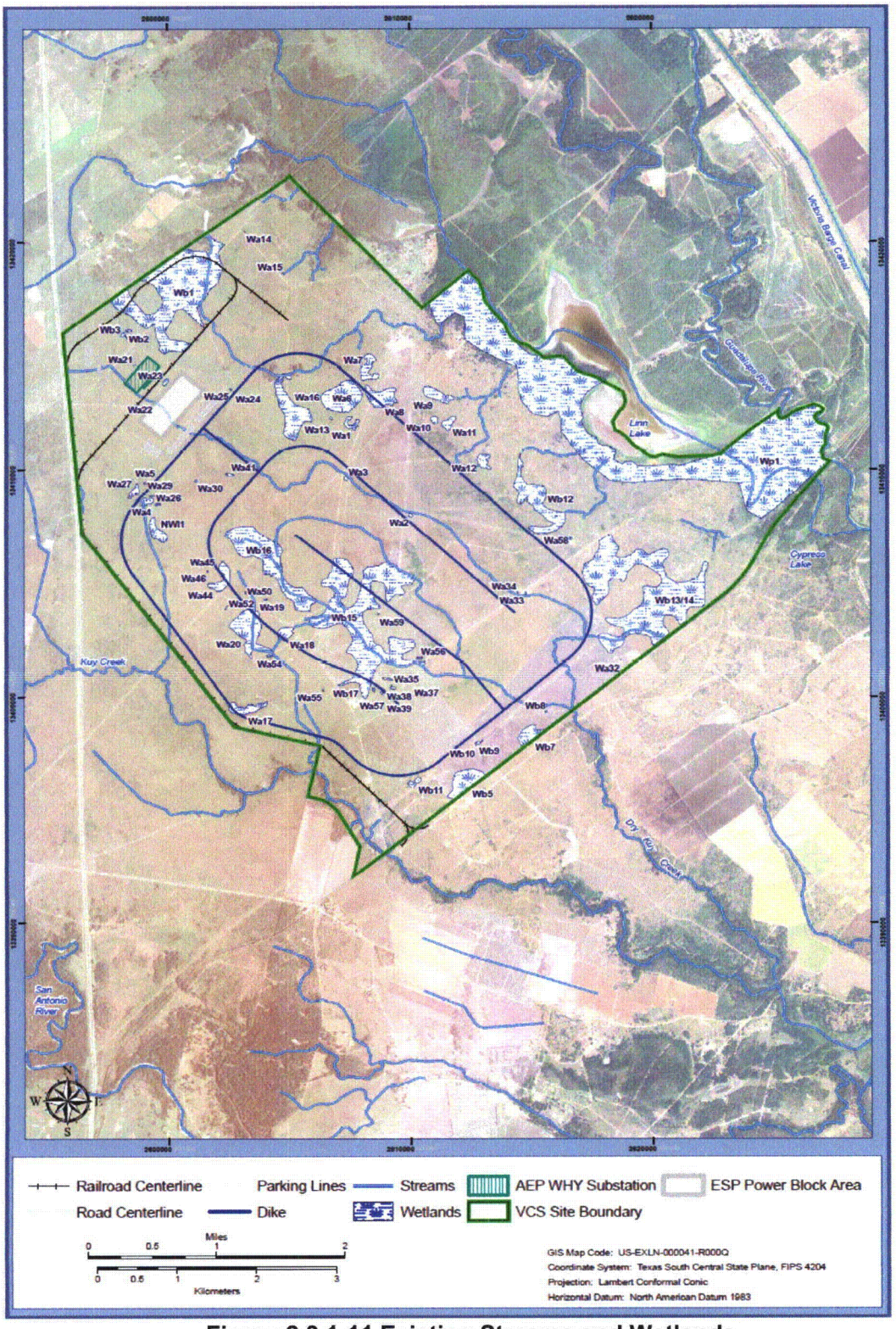


Figure 2.3.1-11 Existing Streams and Wetlands

The first paragraph of ER Subsection 2.4.1.2 will be revised as follows:

2.4.1.2 General Site Description

The VCS construction landscape, as described in Subsection 2.2, consists of a proposed cooling basin (~~5785~~ 5424 acres disturbed) and approximately 1350 additional acres for the power block, ancillary facilities, parking, and laydown areas. Associated offsite areas include a cooling basin blowdown line to the Guadalupe River parallel to the transportation corridor, a rail spur, and an approximately 8.5 to 11-mile-long raw water makeup (RWMU) system pipeline between the RWMU pumphouse in Refugio County and VCS (Figures 2.2-4 and 2.2-5). New transmission corridors would be established to connect VCS with the existing power grid, but the exact route of these corridors has yet to be determined (Subsection 2.2.2.1). See also Subsection 2.4.1.7.

The last paragraph on page 2.4-3 in ER Section 2.4.1.2 will be replaced with the following:

Potential wetland habitats on the VCS site were examined in 2008 and 2009 employing the routine wetland delineation methods described in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (USACE 2008) to assess for occurrence of hydrophytic vegetation, hydric soils, and wetland hydrology, as indicative that wetlands were present (where differences are noted between the two documents in field approach, the Regional Supplement took precedence over the 1987 manual). Potential wetland habitats examined included wetland areas identified on USFWS National Wetland Inventory (NWI) maps, unmapped potential wetland habitats observed during field efforts, and intermittent/ephemeral stream beds and associated potential wetlands. Site surveys indicated the presence of approximately 1843 acres of wetlands on the 11,532-acre VCS site. The field evaluation of wetlands occurred during unusually dry conditions, which led to a reliance on soil indicators for wetlands delineation. ~~Because Exelon has not submitted a revised jurisdictional determination request or a permit application to USACE, the USACE has not concurred on the wetlands delineation or determined the extent of federally jurisdictional waters at the site.~~ At Exelon's request, the U.S. Army Corps of Engineers (USACE) completed a preliminary jurisdictional determination (PJD) for the potential VCS disturbance area to unofficially determine the limits of wetlands and waters under the agency's Clean Water Act jurisdiction. PJD activities identified two wetlands not included in the 2009 Exelon delineation, the addition of which raised the unofficial wetlands acreage on the VCS site to approximately 1853 acres. The USACE will officially determine the extent of federally jurisdictional wetlands and waters at the VCS site at the COL stage of the project.

ER Figures 2.4-1 and 2.4-2 will be revised as follows:

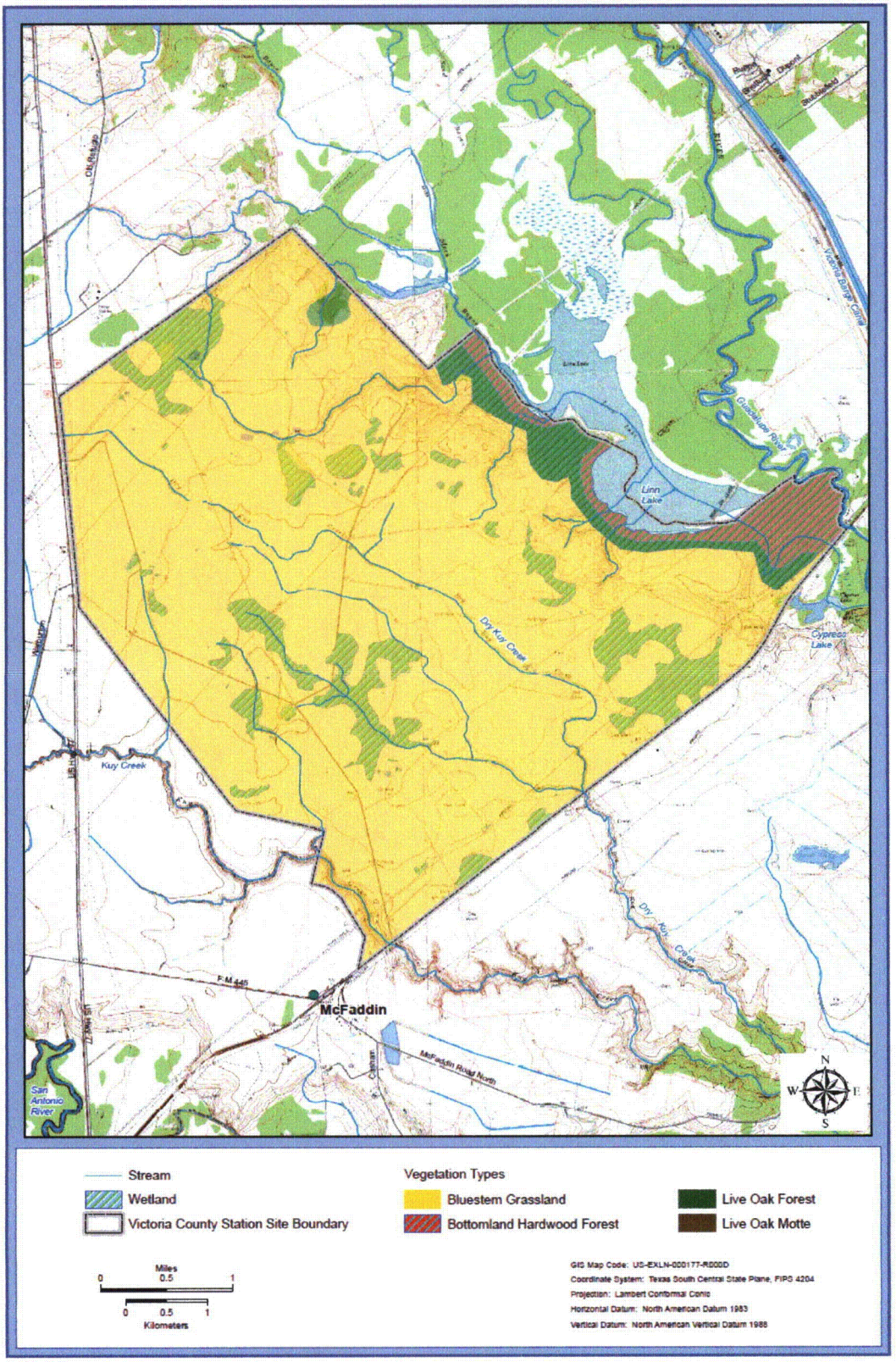


Figure 2.4-1 Habitat Types on the VCS Site

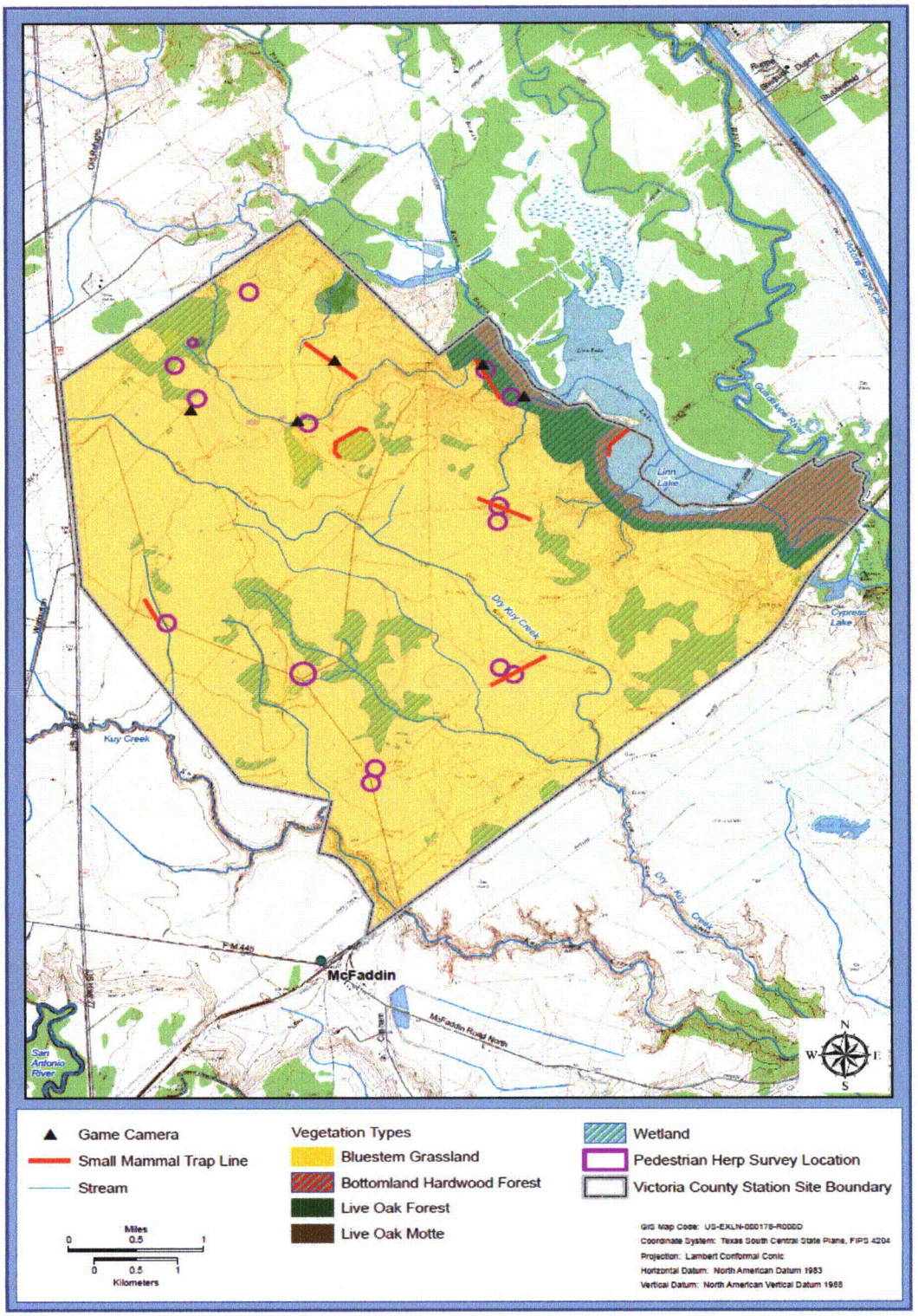


Figure 2.4-2 Locations of Herpetological and Mammal Surveys on the VCS Site

ER Chapter 3 Changes

The next to the last paragraph in ER Subsection 3.1.5 on page 3.1-5 will revised as follows:

Temporary facilities provided during construction of the units are shown in Figure 3.1-8. The total land area to be developed, excluding the makeup water pump house area, can be seen in Figure ~~3.1-9~~ 4.1-1.

The following line item in ER Table 3.1-1 (Sheet 6 of 6) will be revised as follows:

Permanently Disturbed acreage	Approximately ~~6354~~ 5939 acres	Approximate area within the VCS site that would be permanently dedicated to the reactors and their supporting facilities.	Refer to Subsection 4.1.1.1 and Table 4.1-1

The first full paragraph of ER Subsection 3.3.1.1 on page 3.3-2 is revised as follows:

The normal and maximum surface water use for the units is shown in Table 3.3-1 including makeup water from the Guadalupe River to the cooling basin. Normal water use is that required to maintain plant normal operation. The maximum values are those expected for abnormal conditions. Figure 3.3-2 illustrates water requirements for all units. Figures 2.2-5 and ~~3.3-3~~ 2.3.1-1 show the location of the intake on the Guadalupe River, which is described in more detail in Subsection 3.4.2.1. Makeup from the Guadalupe River to the cooling basin is selected to be a maximum instantaneous rate of 217 cfs (97,396 gpm) but not more than 75,000 acre-feet per year.

The first paragraph of ER Subsection 3.9.1.8 will be revised as follows:

3.9.1.8 Cooling Basin Construction

The cooling basin will have a permanent footprint of approximately ~~5785~~ 5351 acres (see Table 4.1-1 for estimated construction disturbance acreages), and a water surface area, depending on the level, of approximately 4900 acres. The top of the perimeter embankment will be at an approximate elevation of 102 feet NAVD 88. The interior water flow diversion dikes will have a top elevation of approximately 99 feet NAVD 88. The bottom elevation of the basins will be approximately 69 feet NAVD 88 (with a 6-inch silt allowance [69.5 feet NAVD 88]), with the flow channel formed sloping down to the intake structure forebay at approximate elevation 60 feet NAVD 88. The high water elevation in the basins, when filled to the design depth, will be approximately 95 feet NAVD 88. The basin design will include a high water overflow spillway structure which will divert overflow to Kuy Creek to the southwest. The interior embankment slope design will include features to preclude erosion of the embankments.

ER Chapter 4 Changes

The second and third paragraphs of ER Subsection 4.1.1.1 are revised as follows:

As shown in Table 4.1-1, approximately ~~6354~~ 5939 acres of the ~~7129~~ 6787 acres disturbed during site preparation and construction would be permanently dedicated to the reactors and their supporting facilities. The new units and associated buildings and switchyard substation would occupy 420 acres. The cooling water basin (~~5785~~ 5424 acres) would be approximately 50 percent of the total site acreage. Most of the dedicated acreage is rangeland. Wetland impacts on the site are described in Subsection 4.3.1. See Section 3.9 for mitigation methods. Current landowners allow seasonal hunting on their property. The associated hunting leases would be restricted or terminated when the property is acquired by Exelon.

Approximately ~~775~~ 848 additional acres would be disturbed for temporary construction facilities, laydown areas, construction parking areas, and borrow/spoil storage. Upon completion of construction activities, the ~~775~~ 848 acres would be recontoured and revegetated to the extent practicable. The land that would be disturbed during the construction of the new units and their supporting facilities is indicated in Table 4.1-1 and Figure 4.1-1.

Table 4.1-1 will be replaced as follows:

~~Disturbed Area~~	~~Acreage~~	~~T/P~~
~~Powerblock Area~~	~~330~~	~~P~~
~~Switchyard Substation Area~~	~~90~~	~~P~~
~~Heavy Haul Road and Cooling Basin Blowdown Line~~	~~22~~	~~P~~
~~Construction Roads and Laydown Areas~~	~~433~~	~~T~~
~~VCND Transportation Corridor[a] (onsite portion)~~	~~34~~	~~P~~
~~Pipeline and Railroad~~	~~93~~	~~P~~
~~Spoils Areas~~	~~342~~	~~T~~
~~Cooling Basin Area~~	~~5785~~	~~P~~
~~**Total Disturbed Area**~~	~~**7129**~~	

~~T = Temporary~~
~~P = Permanent~~

Table 4.1-1
Site Disturbed Area Acreage

On-Site Disturbance Area	Permanent (Acres)	Temporary (Acres)	Total Acres Disturbed
Power Block Area	330		330
AEP/WHY Substation Area	90		90
Transportation Corridor[a]	34		34
CB Blowdown Line	9		9
Heavy Haul Road	13		13
Construction Roads and Laydown Areas		433	433
Pipeline and Railroad	112		112
North Spoils Area		50	50
Basin Spoils Areas		292	292
Cooling Water Basin	5,351	73	5,424
Total Area	**5,939**	**848**	**6,787**

(a) The VCND Transportation Corridor is not part of the proposed project.

Figure 4.1-1 will be updated, as follows:

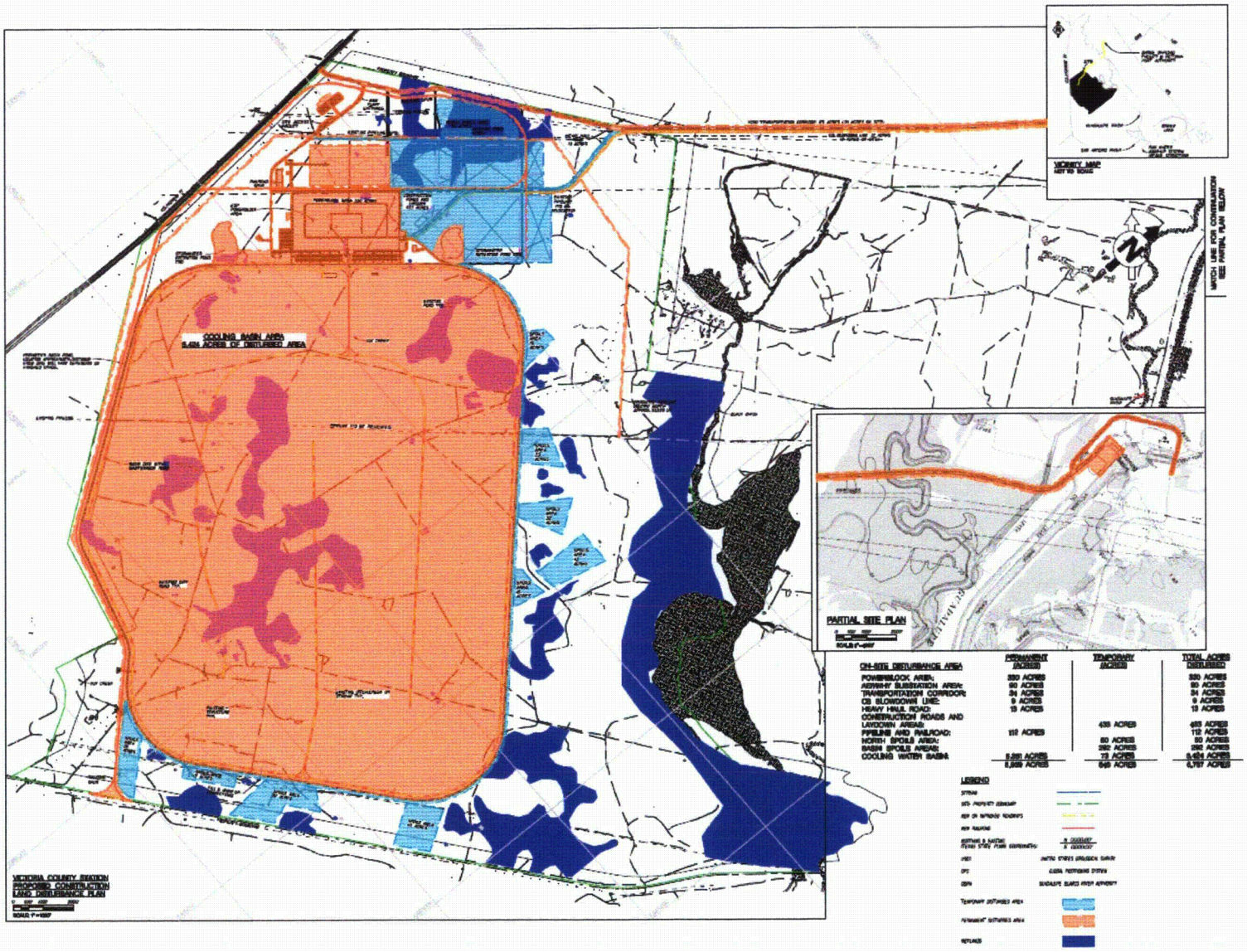


Figure 4.1-1 Construction Area of Disturbance

The second paragraph of ER Section 4.2 will be revised as follows:

Water bodies that could be affected by the construction activities at the VCS site and its vicinity include the Guadalupe River and the San Antonio Bay system, the Victoria Barge Canal, Kuy Creek and Dry Kuy Creek and their associated onsite tributaries, Linn Lake, more than one dozen small, isolated stock ponds, and ~~30 isolated~~ wetlands located on the site (including six large isolated wetlands ranging in size from approximately 10.6 acres to 38.5 acres). Other bodies of water could potentially be affected by new transmission line construction. Groundwater in the Chicot and Evangeline Aquifers underlying the site may also be affected.

The first paragraph of ER Subsection 4.3.1.1 will be revised as follows:

4.3.1.1 The Site and Vicinity

Construction of VCS and associated facilities would result in approximately ~~7129~~ 6787acres being disturbed (and represent the maximum possible area of soil exposed at one time) on site during the construction phase (Section 4.1). Approximately ~~6544~~ 6145 acres of uplands (comprised of bluestem grasslands/brush rangeland and scattered oak forest/oak mottes) and approximately ~~585~~ 642 acres of wetlands occur on land that would be disturbed. Of this total, approximately ~~6354~~ 5939 acres of habitat onsite would be lost permanently due to construction of power-generating facilities and the cooling basin (see Figure ~~3.9-1~~ 4.1-1). At the end of the construction phase, approximately ~~775~~ 848 acres on site of temporarily disturbed areas such as construction parking lots, spoils storage areas, and laydown areas (Table 4.1-1) would be restored and revegetated. Clearing methods, disposal of construction wastes, and methods of limiting erosion, runoff, and siltation are described in Section 3.9. A heavy haul road of approximately 13 acres would be built to allow transportation of heavy components via the Victoria County Navigation District (VCND) transportation corridor to the site. The VCND transportation corridor would be independent of the VCS project; however, a portion of the estimated 175-acre VCND transportation corridor would occur on the VCS site (about 34 acres). A 48-inch discharge blowdown line would be installed (buried) within the rights-of-way of the heavy haul road (approximately 9 onsite acres) and/or transportation corridor (roughly 28 offsite acres) between VCS cooling basin and the Guadalupe River (both acreages are included in the corridor acreages listed above). Exelon determined that colocating the VCND transportation corridor and blowdown line would produce fewer impacts than if the corridors were separate.

The first paragraph of ER Section 4.3.1.1 on page 4.3-2 will be revised as follows:

As described in Subsection 2.4.1, the proposed ~~onsite~~ 11,532-acre ~~project area~~ site consists primarily of rangeland in varying stages of succession interspersed with intermittent streams, depressional wetlands, scattered oak mottes, and habitats found throughout the region. Some oak forests occur where the terrain slopes down toward the Guadalupe River basin on the eastern side of the property. The onsite rangelands are typically bluestem grasslands with encroaching mesquite and huisache shrubs (Figure 2.4.1-1). Most, if not all, of the site has been grazed by cattle for many decades. The VCS site rangeland vegetation is managed by fire, grazing rotation, and mechanical and chemical shrub control methods, which benefit both livestock and wildlife. Plants and plant communities on the site are typical of similar habitats within the region. No listed, rare, or unusual plant species were observed during site surveys conducted in 2008.

Construction activities would result in the loss of approximately ~~7129~~ 6787 acres of onsite habitat and approximately 67 acres of offsite habitat (excluding the transmission corridors and RWMU pipeline) during construction. Between 119 and 159 acres would be disturbed for the RWMU pipeline. However, these habitat losses would not significantly reduce the regional diversity of plants or plant communities.

The first paragraph in ER Section 4.3.1.1.1 will be revised as follows:

4.3.1.1.1 Wetlands

Wetlands provide breeding habitat, foraging habitat, protective cover, and water sources for a variety of wildlife types and are considered "important habitats" under NUREG-1555. The acreages of depressional wetlands and lengths of streams within the construction footprint (including laydown and spoil areas) within the VCS site were assessed in 2008 using wetland delineation methods described in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987). In 2009, all lands except the bottomland areas associated with Linn Lake and Black Bayou were reassessed using the Corps Manual (Environmental Laboratory 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (USACE 2008). Where differences are noted between the two documents in field approach, the Regional Supplement took precedence over the 1987 manual. ~~The~~ Exelon's assessment determined approximately 1843 acres of various wetland habitats, including maintained livestock ponds, within the site boundary. Two additional wetlands with a combined acreage of about 10 acres were identified during USACE preliminary jurisdiction activities, raising the onsite wetlands total to approximately 1853 acres. All of the depressional wetlands within the permanent construction footprint (approximately ~~506~~ 515 acres) would be lost. ~~Spoils areas will be positioned such that wetland areas are not impacted either directly or indirectly.~~ The spoils areas adjacent to the cooling basin (referred to as Basin Spoils Areas in Table 4.1-1) will be positioned to avoid and minimize direct and indirect wetlands impacts to the extent practicable. Approximately ~~78~~ 127 acres of depressional wetlands occur within temporarily disturbed construction areas (e.g., laydown yards). Wetland sites within these temporarily disturbed areas would be avoided during construction activities to the extent practicable, and measures would be taken to ~~prevent~~ minimize their disturbance~~, or the site will be shifted to avoid the wetland habitat.~~ The permanently lost wetland acreages are largely ephemeral water bodies whose existence is rainfall dependent and their potential value to local wildlife, if any, varies seasonally with timing and abundance of rainfall. ~~Approximately 70 of the 506 wetland acres are~~ During the 2009 delineation, Exelon found numerous onsite wetlands to be ~~considered~~ isolated, with no connection to permanent waters. At Exelon's request, the U.S. Army Corps of Engineers (USACE) completed a preliminary jurisdictional determination (PJD) for the potential VCS disturbance area to unofficially determine the limits of wetlands and waters under the agency's Clean Water Act jurisdiction. The extent to which the affected wetlands fall within federal jurisdiction will be officially determined via an approved USACE jurisdictional determination (JD) during completion of the permitting activities discussed in Section 1.2 at the COL stage.

The third and fourth full paragraphs in ER Section 4.3.1.1.1 on page 4.3-3 will be revised as follows:

To the extent possible, sensitive habitats like wetlands and streams would be avoided during construction on the VCS site (see Section 3.9). However, given the scale of this construction project and the dispersed nature of the depressional wetlands and intermittent/ephemeral streams on the VCS site, several depressional wetlands and streams would be impacted. The bottomland areas adjacent to Black Bayou and Linn Lake are outside the construction footprint, but could be impacted by upgradient construction activities, resulting in sedimentation and erosion. During construction, mitigation procedures to maintain natural drainage patterns and limit erosion and sedimentation would include maintenance of vegetation cover and use of silt fences, mulching, and seeding (Section 3.9). Table 4.3-1 summarizes the potential disturbance of wetlands and linear water features in acreage and linear feet, respectively, on the VCS site from construction activities.

Given the permanent loss of approximately ~~506~~ 515 acres of existing, although primarily ephemeral, wetland habitats, the impact of construction on site wetlands is considered MODERATE. Mitigation for applicable acres will likely occur by modifications and/or improvements to the Linn Lake/Black Bayou wetland system.

The first paragraph of ER Subsection 4.3.1.1.2 will be revised as follows:

4.3.1.1.2 Terrestrial Wildlife

Approximately ~~7129~~ 6787 acres would be disturbed for this project. The area to be disturbed is primarily rangeland but includes some ephemeral wetlands and streams. Approximately ~~6354~~ 5939 acres would be permanently disturbed due to construction of power-generating facilities, support facilities, and the cooling basin. Wildlife that temporarily and/or permanently uses this habitat would be displaced by construction activities. This includes the game species defined as "important wildlife" in NUREG-1555, *Standard Review Plan for Environmental Reviews for Nuclear Plants* (U.S. NRC Oct 1999). On the VCS site, these game animals include white-tailed deer, rabbits, northern bobwhites, sandhill cranes, doves, wild turkeys, squirrels, and feral pigs. Given that large areas of similar habitat lie adjacent to the site, larger and more mobile species would likely disperse to these areas. However, individuals of smaller, less mobile species (e.g., small mammals, reptiles, and amphibians) would suffer mortalities during construction. The loss of these animals should not affect the status of regional populations of these species.

The first paragraph of ER Subsection 4.3.2.1 will be revised as follows:

Construction of the VCS cooling basin would begin early in the construction phase of the project and is expected to take more than 5 years, 2 of which would be required to fill the basin. Approximately ~~5785~~ 5424 acres of the VCS site would be disturbed during construction of the cooling basin, approximately 50 percent of the entire VCS site (Section 4.1). Construction of the cooling basin would result in an alteration of the landscape that would include clearing and grading of upland areas, excavating large volumes of soil to create the basin, building dikes to direct flow within the basin, and erecting embankments around the periphery of the basin. All aquatic habitats within the footprint of the cooling basin would be lost or degraded by earth-moving activities and

then inundated when the basin and reservoir are filled. The basin that would cover the former ranchland, wetlands, stock ponds, and streams could contain fish, as they would be filled with water pumped from the Guadalupe River. The cooling basin would be a harsh environment (high water temperatures in summer; occasionally elevated levels of solids) and would not be expected to support a balanced biological community as defined in 40 CFR 125.71. Fish species such as Western gambusia, red shiner, and inland silversides that tolerate a wide range of environmental conditions, including high water temperatures, would be expected to predominate. No recreational fishing would be allowed in the cooling basin.

A new Table 4.3-1 will be added as follows:

Table 4.3-1: Wetland and Linear Water Feature Disturbance

Wetlands		
Total onsite wetlands[1,2]	1853	acres
Permanent wetland disturbance[3]	515	acres
Permanently disturbed PJD wetlands[3]	512	acres
Temporary wetland disturbance	127	acres
Temporarily disturbed PJD wetlands	127	acres
Linear Water Features		
Total onsite linear water features	147,059	linear feet
Permanent linear feature disturbance	95,453	linear feet
Temporary linear feature disturbance	598	linear feet

Notes

1. Per Exelon's 2009 VCS site wetland delineation (Tetra Tech 2010).
2. Wetlands Wb17 (0.34 acres) and NWI1 (9.41 acres) were identified during completion of the US Army Corps of Engineers (USACE) Preliminary Jurisdictional Determination (PJD; USACE 2011) subsequent to completion of Exelon's 2009 wetland delineation. These wetlands are included in the reported wetland acreage. Wb17 and NWI1 are shown on Figure 4.1-1.
3. The reported acreage includes wetlands Wb17 and NWI1, identified during completion of the USACE PJD (USACE 2011). Approximately 3 acres identified in Exelon's wetland delineation were not included as Clean Water Act jurisdictional in the USACE PJD (USACE 2011). See Note 2 above.

The second paragraph in ER Subsection 4.4.2.2.5 will be revised as follows:

As stated in Subsection 4.4.1.4, the major land uses within 6 miles of the VCS site are rangeland, forest land, and agricultural land. The topography of the region and the site is relatively flat and sparsely populated with trees. Major, temporary construction facilities would include a parking lot, laydown and fabrication areas, offices, warehouses, workshops, a concrete batch plant, cement storage silos, and cranes. The cranes would reach elevations of approximately 200 feet above grade. Major permanent structures would include several power block buildings and the VCS cooling basin. When completed, the tallest of the VCS buildings would reach heights of up to 230 feet above plant grade. The power block grade elevation would be 95 feet NAVD 88. The VCS cooling basin would have a construction footprint of roughly ~~5785~~ 5424 acres and a permanent footprint of approximately 5351 acres. Most of the perimeter embankment of the cooling basin would be approximately elevation 102 feet NAVD 88.

The first bullet in ER Section 4.6 on page 4.6-6 will be revised as follows:

- Construction Area — The total area that would be disturbed for the construction of units at the VCS site is estimated to be approximately ~~7129~~ 6787acres, excluding transmission lines. Of these developed areas, approximately 330 acres would be disturbed for construction of the power block area (including SSCs). The area that would be developed for the power block area, therefore, represents less than 5 percent of the total area that would ultimately be developed (excluding transmission lines). Because the total disturbed area considered above does not include transmission lines, the estimated percentage of disturbed area attributable to power block area construction (including SSCs) is conservative. For the purposes of this assessment, the impacted area associated with SSCs is less than 5 percent.

The following lines in ER Table 4.6-1 (Sheet 1 of 5) will be revised as follows:

Impact	Adverse Impact Description or Activity	Specific Measures and controls
Land Use Impacts		
4.1.1 The Site and Vicinity		
	Permanently disturbing ~~6354~~ 5939 of ~~7129~~ 6787acres disturbed during construction.	CMC7
	Temporary disturbance of ~~775~~ 848 acres.	CMC2, CMC3

The following lines in ER Table 4.6-1 (Sheet 2 of 5) are revised as follows:

4.3 Ecological Impacts		
4.3.1 Terrestrial Ecosystems	Construction activities would result in the permanent loss of approximately ~~6354~~ 5939 acres of habitat, but would not reduce the regional diversity of plants or plant communities.	CMC1, CMC2, CMC3, CMC13
	Loss of approximately ~~6354~~ 5939 acres of rangeland habitat would result in the displacement of large and/or mobile terrestrial wildlife and the mortality of the smaller, less mobile species. The loss of these animals would not impact or otherwise threaten the status of regional populations of these species.	CMC1, CMC2, CMC3, CMC6, CMC13

The following line in ER Table 4.6-2 (Sheet 2 of 4) will be revised as follows:

4.2.2 Water Quality Impacts	Small (Groundwater) Small (Surface Water)	95 95	5 5	Estimates are based on the fraction of the disturbed area associated with construction of safety-related structures, systems, components (SSCs) or activities. Construction of these SSCs will occur on no more than 330 acres (disturbed area associated with the construction of proposed units within the power block area) of the total of ~~7129~~ 6787acres expected to be disturbed for the construction of units located at the VCS site (excluding transmission corridors).

The following line in ER Table 4.6-2 (Sheet 3 of 4) will be revised as follows:

4.3.2 Aquatic Ecosystems	Small	95	5	Estimates are based on the fraction of the disturbed area associated with construction of safety-related structures, systems, components (SSCs) or activities. Construction of these SSCs will occur on no more than 330 acres (disturbed area associated with the construction of proposed units within the power block area) of the total of ~~7129~~ 6787 acres expected to be disturbed for the construction of units located at the VCS site (excluding transmission corridors).

The first paragraph in Subsection 4.7.1 will be revised as follows:

4.7.1 Land Use

Construction of VCS would result in small land use impacts at the site and in the transmission corridors. The approximately 11,500 acre site is primarily rangeland and construction would disturb approximately ~~7129~~ 6787 acres, of which approximately ~~6354~~ 5939 acres would be permanently disturbed (Subsection 4.1.1.1). The planned projects described above were reviewed for cumulative land use impacts.

The following lines in Table 4.7-2 (Sheet 1 of 2) will be revised as follows:

Land Use	• VCS: Converting land, primarily rangeland, to industrial use and disturbing land that has not been previously disturbed (approximately ~~7129~~ 6787 acres of the approximately 11,500-acre site disturbed, ~~6354~~ 5939 of them permanently).	Small to Moderate
Terrestrial Ecology	• VCS: loss of approximately ~~6485~~ 6145 acres of grassland/rangeland and ~~585~~ approximately 642 acres of wetlands habitat would result in the displacement of large and/or mobile terrestrial wildlife and the mortality of the smaller, less mobile species. The loss of these animals should not impact or otherwise threaten the status of regional populations of these species. Loss would not reduce the regional diversity of plants or plant communities.	Moderate

Chapter 5 Changes

The first paragraph of ER Subsection 5.1.1.1 will be revised as follows:

5.1.1.1 The Site

Land use impacts from construction are described in Subsection 4.1. As described in Section 4.1, ~~6354~~ 5939 acres of the 11,532 acres proposed for the development of the VCS facility would be permanently disturbed during the operational life of the facility. The proposed units and associated buildings and switchyard/substation would occupy 420 acres. Approximately 149 acres within the site boundary would be associated with the transportation corridor, haul road, rail spur, and pipelines. The proposed cooling basin would occupy approximately ~~5785~~ 5351 acres, of which 4926 acres represent the size of the cooling basin at its normal high water level.

The following line in Table 5.10-1 (Sheet 1 of 5) will be revised as follows:

5.1.1 The Site and Vicinity	Approximately ~~6354~~ 5939 acres of land would be permanently dedicated to the plant use.	None[(a)]

The first paragraph of ER Subsection 5.11.1 will be revised as follows:

5.11.1 Land Use

Approximately ~~6354~~ 5939 acres of land would be dedicated for VCS operations. The land use impact for the operation of VCS is described as small in Section 5.1. Operation of the planned projects described above located within 50 miles of VCS was reviewed for cumulative land use impacts. Operation of Coleto Creek Unit 2 would not impact land use within 50 miles of VCS, and both STP and the WSEC sites are more than 50 miles away. The Goliad project would continue to dedicate 1421 acres to mining. Furthermore, operation and maintenance of transmission lines and the GBRA LGWSP water delivery line would have small impacts to land use. The transmission corridors and the pipeline right-of-way are compatible with many land use categories including agricultural. Operation of the GBRA diversion canal and reservoirs would not impact land use. The cumulative land use impact of the operation of these other projects along with the operation of VCS would be SMALL.

The first paragraph of ER Subsection 5.11.3.1 will be revised as follows:

5.11.3.1 Terrestrial

Approximately ~~6354~~ 5939 acres of the VCS site would be permanently disturbed and unavailable as habitat for terrestrial wildlife. However, this acreage includes the cooling basin that would provide large, open water habitat of benefit to multiple species of water birds. There are no other projects within close enough proximity to the VCS site to be considered cumulative. With regard to impacts to resident waterfowl and migratory birds, the cumulative impacts analysis considers projects in the lower Guadalupe River basin.

The following lines in ER Table 5.11-3 will be revised as follows:

Land use	• VCS: Permanent use of ~~6354~~ 5939 acres land. • GBRA Water Supply Projects: Operation and maintenance of the water supply infrastructure would have small impacts to land use. • Operation and maintenance of transmission lines would have small impacts to land use.	Small
Terrestrial Ecology	• VCS: VCS operation on approximately ~~6354~~ 5939 acres including basins that provide large, open water habitat of benefit to multiple species of water birds. Water withdrawals and returns to the lower Guadalupe River basin resulting in reduced freshwater inflows into the Guadalupe estuary and San Antonio Bay, which supports migratory birds. • GBRA water transfer would result in some water loss resulting in reduced freshwater inflows into the Guadalupe estuary and San Antonio Bay, which support migratory birds.	Small

ER Chapter 6 Changes

The first paragraph of ER Subsection 6.5.1.1 will be revised as follows:

6.5.1.1 Pre-Application Terrestrial Ecological Monitoring

As described in Subsection 2.4.1, the VCS site consists of approximately 11,500 acres and is characterized by gently rolling rangeland for cattle interspersed with ephemeral streams and wetlands and small clusters of trees (typically oak "mottes"). The rangeland generally consists of coastal prairie/bluestem grassland (McMahan et al., 1984) maintained in various stages of succession by prescribed burning, rotation of grazing livestock, and shrub control measures. The eastern edge of the site slopes sharply towards Black Bayou and Linn Lake. Hardwoods and shrubs dominate the slopes and transition into bottomland hardwood regions closer to the water bodies. Approximately ~~5785~~ 5351 acres are dedicated to the plant's cooling basin (including associated berms surrounding this structure).

ER Chapter 10 Changes

The following line in ER Subsection 10.1.1 on page 10.1-1 will be revised as follows:

Land Use

CU1. Disturbance of approximately ~~7129~~ 6787 acres composed primarily of rangeland by conversion to industrial land use, with a permanent loss of approximately ~~6354~~ 5939 acres of terrestrial habitat.

The following line in ER Subsection 10.1.1 on ER page 10.1-2 will be revised as follows:

Ecology

CU10. Permanent loss of approximately ~~6354~~ 5939 acres of habitat and wetlands.

The following line in ER Subsection 10.1.2 on page 10.1-4 will be revised as follows:

Land Use

OU1. Approximately ~~6354~~ 5939 acres of land would not be available until the completion of decommissioning.

The following lines on ER Table 10.1-1 (Sheet 1 of 4) will be revised as follows:

Land Use	Permanently disturbing approximately ~~6354~~ 5939 acres of an approximately ~~7129~~ 6787 acre land disturbance.	CMC7	CU1
	Temporary disturbance of approximately ~~775~~ 848 acres.	CMC2, CMC3	CU1

The following line on ER Table 10.1-1 (Sheet 2 of 4) will be revised as follows:

Ecology (Terrestrial and Aquatic)	Construction activities would result in the permanent loss of approximately ~~6354~~ 5939 acres of habitat but would not reduce the regional diversity of plants or plant communities. The loss of rangeland habitat would result in displacement of large and/or mobile terrestrial wildlife and the mortality of the smaller, less mobile species. The loss of these animals would not affect or otherwise threaten the status of regional populations of these species.	CMC1, CMC2, CMC3, CMC6, CMC13	CU10, CU11, CU12, CU13

The following line on ER Table 10.1-2 (Sheet 1 of 5) will be revised as follows:

Land Use	Approximately ~~6354~~ 5939 acres of land would be dedicated to the plant use.	No practical measures of mitigation.	OU1

The first paragraph of ER Subsection 10.2.1.1 will be revised as follows:

10.2.1.1 Land Use Commitments

The new units and their supporting facilities would be located on the approximately 11,500-acre VCS site in Victoria County, Texas (Figure 2.1-1). The land is currently classified as rangeland, forest land and wetland (Table 2.2-1). Construction would occur on land that has not been previously disturbed. Most of the dedicated acreage is rangeland. Approximately ~~6354~~ 5939 acres of the ~~7129~~ 6787 acres disturbed during the pre-construction and construction periods would be permanently dedicated to the new units, their supporting facilities and the cooling basin.

The second and third paragraphs of ER Subsection 10.2.1.3 will be revised as follows:

Approximately ~~775~~ 848 acres disturbed during construction for temporary construction facilities and activities would be restored and could be available as a habitat upon completion of construction. The cooling basin could become a habitat for water birds and serve as an aquatic habitat. The decommissioning of VCS would result in restoration of the area.

Construction of the cooling basin would require alteration of the landscape. All aquatic habitats within the approximately ~~5785~~ 5424 acre construction footprint of the cooling basin would be eliminated or degraded by earth-moving activities. The cooling basin could support aquatic life; however, due to the high summer water temperatures possible in portions of the basin, it would be expected to primarily support thermally tolerant aquatic communities. In addition, aquatic resources such as benthic organisms, fish, and shellfish would be lost as a result of impingement and entrainment at the RWMU intake structure during filling of the basin and reservoir and operation of VCS. However, as discussed in Section 5.3, impingement and entrainment would not endanger regional populations, due to the common nature of the potentially affected species in southeastern Texas. Additionally, no aquatic species of concern (i.e., listed as state or federally threatened or endangered) and no critical habitats have been identified on the VCS site, or in the Guadalupe River near the site. The decommissioning of VCS

could eventually result in restoration of the area with the possible exception of the water conveyance facilities.

The second paragraph of ER Subsection 10.3.1 will be revised as follows:

VCS would be located on an approximately 11,500-acre site in Victoria County, Texas. Approximately ~~6354~~ 5939 acres of the ~~7129~~ 6787 acres, disturbed during the preconstruction and construction periods, would be dedicated to the new electricity generation units, their supporting facilities, and the cooling basin. Activities currently associated with this site are cattle grazing and a limited amount of oil and gas production. During construction and operation of VCS, the land would not be available for these uses; however, these activities represent only a small portion of such activities in the region. Upon completion of construction, the remaining areas would be restored and available for use. Decommissioning of VCS would likely result in release of the area for unrestricted use. However, the water conveyance facilities may continue to be used to support non-VCS related uses.

ESP TE-6 (eRAI No.6427):

NRC Request

TE-6 ESRP Section 2.4.1 directs the staff to describe each important habitat type and evaluate temporary and permanent impacts. The information is needed for a thorough evaluation of potential impacts of the project. Verify that there would be no encroachment by the project into Linn Lake.

RAI Response:

Exelon confirms that there would be no project encroachment on Linn Lake. The construction area of disturbance is presented on revised ER Figure 4.1-1, provided in response to RAI TE-5.

Associated ESPA Revisions:

There are no ER changes associated with this response.

ESP TE-7 (eRAI No.6427):

NRC Request:

TE-7 ESRP Sections 2.4.1 and 4.3.1 direct the staff to describe each habitat type and evaluate temporary and permanent impacts. Pond acreages are needed for a detailed evaluation of potential impacts of the project. Provide pond number and size ranges for the potential permanent and temporary impact areas and total acreage of disturbance.

Response:

The 2009 delineation of the Victoria County Station (VCS) site identified a number of wetland areas associated with cattle watering ponds (Tetra Tech 2010). Many of the ponds are isolated with no surface water input or output. Observations over time indicate that many of the ponds dry out completely during a portion of the year.

Table 1 summarizes the ponds identified on the VCS site and the pond acreage that would potentially be disturbed by the construction of VCS. The disturbed acreage is categorized as permanent or temporary based on the revised VCS construction disturbance areas shown in response to RAI 6427, TE-5. As indicated in that response, the revised construction footprint will be shown on Figure 4.1-1 in a future revision of the Environmental Report. Figure 4.1-1 also depicts the locations of wetlands and the ponds discussed herein as they relate to the disturbed areas of the site. Note that the pond locations can be viewed at a smaller scale on Figure 4, Sheets 1-13, of the VCS wetland delineation report (Tetra Tech 2010). The VCS wetland delineation report was submitted via Exelon letter NP-12-0006, dated February 15, 2012 (ML12079A233).

Reference:

Tetra Tech 2010. *Site-Wide Wetland Delineation, Victoria County Site, Victoria, Texas*, Prepared for Exelon Generation Company, LLC by Tetra Tech, January 2010.

Associated ESPA Revisions:

There are no ER changes associated with this response.

Table 1. Potential Ponds Disturbance at the VCS Site (Sheet 1 of 4)

Wetland ID	Field Wetland Classification	Description	Disturbed Area (acres)		Undisturbed Area (acres)
			Temporary	Permanent	
Wa2	PUBFx	Wetland Wa2 is a human-made cattle pond that is groundwater fed by a windmill well pump.		0.48	
Wa3	PUBFx	Wetland Wa3 is a human-made cattle pond with water levels that are controlled and maintained with a well pump. The pond is connected to Dry Kuy Creek by means of a small channel that flows out the northeast corner of the pond.		0.47	
Wa13	PEM1A	Wetland Wa13 was historically a palustrine emergent (PEM1A) isolated NWI wetland and has since been converted for use as a cattle watering pond. The water source for this pond is a groundwater fed pump-driven system that is operated by generator and air compressor.		0.21	
Wa14	PUBFx	Wetland Wa14 is a palustrine unconsolidated bottom (PUBFx) isolated wetland that was created for use as a cattle watering pond and has since converted to a palustrine emergent wetland (PEM). The water source for this pond is a groundwater fed pump-driven system that appears to have not been in operation for some time.			0.05
Wa15	PUBFx	Wetland Wa15 is a palustrine unconsolidated bottom (PUBFx) wetland that was created for use as a cattle watering pond. The water source for this pond is a groundwater fed pump-driven system that is operated by generator and air compressor.			0.21
Wa16	PEM1C	The northern most portion of Wetland Wa16 is connected with streams Sb13 and Sb14, as well as a human-made cattle pond. The cattle pond is fed by a windmill well pump and was holding water at the time of the survey.		41.88	
Wa18	PEM1A	Wetland Wa18 is a palustrine emergent (PEM1C) NWI wetland with an associated palustrine unconsolidated shore (PUSCx) wetland that was historically used as a cattle watering pond.		6.39	
Wa19	PUBFx	Wetland Wa19 appears to be a human-made cattle water pond with an associated wetland fringe.		0.14	

Table 1. Potential Ponds Disturbance at the VCS Site (Sheet 2 of 4)

Wetland ID	Field Wetland Classification	Description	Disturbed Area (acres)		Undisturbed Area (acres)
			Temporary	Permanent	
Wa21	PUBFx	Wetland Wa21 is a palustrine unconsolidated bottom (PUBFx), palustrine emergent (PEM1A) wetland. The PUBFx portion of this wetland appears to be a human-made cattle watering pond. The PEM1A aspect of this wetland is most likely to be a result of cattle pond operations.		0.23	
Wa22	PUSCx	Wetland Wa22 is a historic cattle pond that is associated with stream Sb1 in the northwestern corner of the VCS site.		0.27	
Wa25	PUBFx	Wetland Wa25 is a human-made cattle pond that appears to be isolated with no surface water input or output.			0.11
Wa29	PEM1Cx	Wetland Wa29 is a non-active, human-made cattle pond that appears to be isolated with no surface water input or output.		0.36	
Wa30	PUBFx	Wetland Wa30 is a human-made cattle pond that receives water from a pump-driven groundwater source.		0.16	
Wa32	PUBFx	Wetland Wa32 is a human-made cattle pond that appears to be isolated with no surface water input or output. The pond has not operated as a cattle pond for some time and it appears the well pump is no longer functioning.			0.05
Wa33	PUBFx	Wetland Wa33 is a human-made cattle pond that appears to be isolated with no surface water input or output. During periods of flooding or high water it is likely that this pond overflows its banks and becomes connected with Dry Kuy Creek.		0.17	
Wa34	PUBFx	Wetland Wa34 is a 0.12 acre palustrine unconsolidated bottom (PUBFx) NWI wetland. This wetland is a human-made cattle pond that appears to be isolated with no surface water input or output. During periods of flooding or high water it is likely that this pond overflows its banks and becomes connected with Dry Kuy Creek		0.12	
Wa35	PEM1Ax	Wetland Wa35 is a human-made cattle watering area that appears to be isolated with no surface water input or output.		0.55	

Table 1. Potential Ponds Disturbance at the VCS Site (Sheet 3 of 4)

Wetland ID	Field Wetland Classification	Description	Disturbed Area (acres)		Undisturbed Area (acres)
			Temporary	Permanent	
Wa37	PUSCx	Wetland Wa37 is an old human-made cattle pond that appears to be isolated with no surface water input or output. It is likely that this pond has not been used for many years as a cattle pond.		0.03	
Wa38	PUSCx	Wetland Wa38 is an old human-made cattle pond that appears to be isolated with no surface water input or output. It is likely that this pond has not been used for many years as a cattle pond.		0.44	
Wa41	PUSCx	Wetland Wa41 is a human-made cattle pond that appears to be isolated with no surface water input or output.		0.65	
Wa50	PUBFx	Wetland Wa50 is a human-made cattle pond that appears to be isolated with no surface water input or output.		0.10	
Wa52	PUBFx	Wetland Wa52 is a human-made cattle pond that appears to be isolated with no surface water input or output.		0.20	
Wa54	PEM1A	Wetland Wa54 is an old human-made cattle pond located in the west central portion of the VCS site in the vicinity of Wetland Wa20 and streams Sa11 and Sa13.		0.37	
Wa55	PEM1C	Wetland Wa55 is a human-made cattle pond that appears to be isolated with no surface water input or output.		0.06	
Wa56	PEM1Ax	Wetland Wa56 is palustrine emergent (PEM1Ax) NWI wetland that is adjacent to Wetland Wb15. Wetland Wa56 is an old human-made cattle pond located in the west central portion of the VCS site in the vicinity of Wetland Wa15 and Stream Sa1.		0.35	
Wa57	PEM1Ax	Wetland Wa57 is an old human-made cattle pond that appears to be isolated with no surface water input or output.		0.42	
Wa58	PUSCx	Wetland Wa58 is a human-made cattle pond that appears to be isolated with no surface water input or output.			0.19
Wa59	PUSCx	Wetland Wa59 is a human-made cattle pond that appears to be isolated with no surface water input or output.		0.08	

Table 1. Potential Ponds Disturbance at the VCS Site (Sheet 4 of 4)

Wetland ID	Field Wetland Classification	Description	Disturbed Area (acres)		Undisturbed Area (acres)
			Temporary	Permanent	
Wb2	PUSCx	Wetland Wb2 is a palustrine unconsolidated shore (PUSCx) NWI wetland, which appears to be isolated with no surface water input or output. The ponded portion of the wetland has been excavated to serve as a cattle watering pond.			0.44
Wb8	PUBFx	Wetland Wb8 is a palustrine unconsolidated bottom (PUBFx) NWI wetland, which appears to be isolated with no surface water input or output. The excavated pond is located on the north side of a field road and was determined to not have an associated vegetated wetland fringe.			0.15
Wb9	PUBFx	Wetland Wb9 is a palustrine unconsolidated bottom (PUBFx) wetland created through artificial watering methods. The wetland contains an associated palustrine emergent (PEM1A) wetland aspect. The wetland appears to be isolated with no surface water input or output. Wetland Wb9 receives its water from a water holding tank that is filled by a windmill. This water storage tank is also associated with Wetland Wb10.			0.43
Wb13 / Wb14	PEM1A	Wetland Wb13/Wb14 is a palustrine emergent/palustrine unconsolidated bottom (PEM1A/PEM1F/PUBFx) wetland that is connected to and drained by streams Sb3 and Sb5. This is a large wetland that incorporates many vegetative communities including grasslands, scrub-shrub, and un-vegetated cattle pond.	2.62	0.91	241.89
Total			2.62	55.04	243.52

ESP TE-9 (eRAI No.6427):

NRC Request

TE-9 ESRP Section 2.4.1 directs the staff to describe recent biological studies. The wildlife survey reports include information regarding important characteristics of the habitats and wildlife on the site which is needed for a thorough description of the resources on the site as well as a detailed evaluation of potential impacts of the project. Provide a copy of the report on small mammals and amphibians

RAI Response:

The requested report, titled "HERPETOLOGICAL and SMALL MAMMAL SURVEY, Exelon Victoria County Site, Located Near McFaddin in Victoria County, Texas," dated June 2008, is provided on the CD in Enclosure 1.

Associated ESPA Revisions:

There are no ER changes associated with this response.

ESP TE-11 (eRAI No.6427):

NRC Request

TE-11 ESRP Section 4.3.1 directs the staff to evaluate impacts to important habitats. The evaluation of potential wetland impacts in the EIS needs to consider proposed wetland mitigation, if any. Provide copies of any wetland mitigation plans that have been prepared, or indicate that no wetland mitigation plans would be prepared until a COL application is submitted.

Response:

Although Exelon has conducted initial discussions with the US Army Corps of Engineers (USACE) regarding wetland mitigation options and opportunities for the VCS site, including potential preservation and enhancement of the existing lacustrine and palustrine forested wetlands surrounding Linn Lake, Exelon has not prepared wetland mitigation plans for the VCS site. Wetland mitigation plans would be prepared in conjunction with USACE permitting activities at the COL phase of the project.

Associated ESPA Revisions:

There are no ER changes associated with this response.

ESP TE-4 (eRAI No.6428):

NRC Request

TE-4 ESRP Section 9.3 directs the staff to describe candidate sites. Land cover types are needed for a thorough evaluation of potential impacts associated with the alternative sites. In particular, since the Matagorda site was downgraded from the proposed site to an alternative site, known information is needed for a more complete impact analysis. Provide land cover types for the alternative sites, their transmission line routes, and water intake and discharge lines. Provide wildlife/habitat survey information for the Matagorda site.

Response:

Exelon submitted the Project Green Nuclear Power Plant Site Selection Report (siting report) to the NRC via letter NP-12-0007, dated February 15, 2012. As described in the siting report and ER Subsection 9.3.2, Exelon followed the process outlined in the EPRI *Siting Guide* (EPRI *Siting Guide: Site Selection and Evaluation Criteria for an Early Site Permit Application*) to determine a composite suitability rating for the Victoria County, Matagorda County, Buckeye, Alpha, and Bravo sites. Exelon used criteria developed from the EPRI general criteria to evaluate the five candidate sites. Based on the composite suitability ratings, the Matagorda County site was initially selected as the preferred site (see ER Figure 9.3-4). The Matagorda County site ranked highest in Health and Safety and overall composite suitability ranking after the initial scoring. The Victoria County site scored second in Health and Safety and was the highest ranked Environmental site.

Based on new information collected during initial investigations, Exelon decided to reevaluate the composite suitability rankings for the Matagorda County and Victoria County sites. Upon rescoring of the Matagorda County and Victoria County sites, the Victoria County had a higher composite suitability rating and was designated as the Preferred Site. The rescoring resulted in the VCS site remaining higher than the Matagorda site in the Environmental category, with a slightly increased margin. Additional information regarding the scoring and rescoring of the sites during the site selection process will be provided in Exelon's response to RAI Letter No.6 (6395), to be submitted no later than June 18, 2012.

Land cover types for the alternative sites and the associated offsite corridors were provided in response to RAI ESP EIS 9.3-1 (6371, RAI Letter No.4) via Exelon letter NP-12-0020 (ML12146A028), dated May 17, 2012. GIS files for the representative alternative site layouts, including intake and discharge pipeline corridors, were also provided in the referenced RAI response. However, GIS files for the alternative site representative transmission corridors were not previously provided and are therefore included on the CD in Enclosure 2.

The report titled "WILDLIFE SURVEY REPORT: 23-26 JULY 2007, PROPOSED EXELON NUCLEAR POWER PLANT SITE, MATAGORDA COUNTY, TEXAS," dated August 22, 2007, is provided on the CD in Enclosure 1.

Associated ESPA Revisions:

There are no ER changes associated with this response.

ATTACHMENT 11

SUMMARY OF REGULATORY COMMITMENTS

(Exelon Letter to USNRC No. NP-12-0024, dated June 11, 2012)

The following table identifies commitments made in this document. (Any other actions discussed in the submittal represent intended or planned actions. They are described to the NRC for the NRC's information and are not regulatory commitments.)

COMMITMENT	COMMITTED DATE	COMMITMENT TYPE	
		ONE-TIME ACTION (Yes/No)	Programmatic (Yes/No)
The first paragraph of ER Subsection 4.3.2 will be revised as shown in a future ESPA revision to indicate that the discussion of water quality best management practices applies to construction of the proposed rail spur. [RAI 6414 Part (b) Response]	March 31, 2013	Yes	No
When conducting rail spur work in wetland areas, wetland mats and board roads could be used if feasible and warranted by field conditions. Wetland disturbance would be limited to the area required to safely and efficiently perform the work, with undisturbed portions of the wetland temporarily demarcated (e.g., by signage or high visibility fence) to limit encroachment. Materials and equipment would be staged in upland areas. Plans for rerouting upgradient swales, as well as detailed engineering for rail and pipeline crossings, would be conducted at the COL stage of the project. [RAI 6414 Part (b) Response]	COL stage of project	Yes	No
Live Oak Motte habitat located in the area denoted for spoils at the north end of the VCS site was categorized as undisturbed. Exelon would take measures to avoid disturbance in that area. [RAI TE-1 Response]	COL stage of project	Yes	No
Exelon will provide the preliminary functions and values assessment to the NRC prior to August 31, 2012. {RAI TE-5 Response]	August 31, 2012	Yes	No
Changes to the ESPA sections, tables, and figures referenced in the RAI TE-5 Response will be incorporated in a future revision of the ESPA to reflect: 1) the addition of two wetlands identified during USACE PJD activities; 2) the revised construction disturbance footprint; and 3) updated potential wetland impact acreages [RAI TE-5 Response]	March 31, 2013	Yes	No

ENCLOSURE 1

CD titled:

Victoria County Station
Early Site Permit Application, Part 3, Environmental Report,
RAI TE-4 and TE-9 Responses, Supporting Documents

NP-12-0024, Enclosure 1
June 2012

CD contents:

1. Report, titled "HERPETOLOGICAL and SMALL MAMMAL SURVEY, Exelon Victoria County Site, Located Near McFaddin in Victoria County, Texas," dated June 2008.

2. Report titled "WILDLIFE SURVEY REPORT: 23-26 JULY 2007, PROPOSED EXELON NUCLEAR POWER PLANT SITE, MATAGORDA COUNTY, TEXAS," dated August 22, 2007.

ENCLOSURE 2

CD titled:

Victoria County Station
Early Site Permit Application, Part 3, Environmental Report,
RAI TE-4 and TE-5 Responses, GIS Files

NP-12-0024, Enclosure 2
June 2012

CD contents:

Folder / Filename	Size (bytes)
Figure 1 Alpha Site Transmission Corridors.mxd	807,424
Figure 2 Bravo Site Transmission Corridors.mxd	977,408
Figure 3 Matagorda Site Transmission Corridors.mxd	670,720
Figure 4 Buckeye Site Transmission Corridors.mxd	835,072
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NRC_Alt_Transmission_Layouts.gdb (folder: 91 files)	--
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a00000001.gdbtablx	5,152
a00000005.freelist	4,440
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a00000010.spx	4,118
a0000000f.spx	4,118
a0000000e.spx	4,118
a0000000d.spx	4,118
a0000000c.spx	4,118
a0000000b.spx	4,118
a0000000a.spx	4,118
a00000009.spx	4,118
a00000007.CatItemTypesByUUID.atx	4,118
a00000007.CatItemTypesByParentTypeID.atx	4,118
a00000006.CatRelTypesByUUID.atx	4,118
a00000006.CatRelTypesByOriginItemTypeID.atx	4,118
a00000006.CatRelTypesByName.atx	4,118
a00000006.CatRelTypesByForwardLabel.atx	4,118
a00000006.CatRelTypesByDestItemTypeID.atx	4,118
a00000006.CatRelTypesByBackwardLabel.atx	4,118
a00000005.FDO_UUID.atx	4,118
a00000005.CatRelsByType.atx	4,118
a00000005.CatRelsByOriginID.atx	4,118
a00000005.CatRelsByDestinationID.atx	4,118
a00000004.FDO_UUID.atx	4,118
a00000004.CatItemsByType.atx	4,118
a00000009.gdbtable	2,367
a0000000a.gdbtable	2,329
a0000000b.gdbtable	2,294
a00000006.gdbtable	2,263
a0000000c.gdbtable	2,058
a00000005.gdbtable	1,869
a00000007.gdbtable	1,705
a00000003.gdbtable	1,664
a0000000d.gdbtable	1,613
a00000002.gdbtable	1,456
a0000000e.gdbtable	1,417
a0000000f.gdbtable	1,413
a00000011.gdbtable	1,400

Folder / Filename	Size (bytes)
a00000010.gdbtable	1,383
a00000001.gdbtable	972
a00000006.gdbindexes	602
timestamps	400
a00000005.gdbindexes	318
a00000004.gdbindexes	310
a00000007.gdbindexes	296
a0000001d.gdbindexes	116
a00000017.gdbindexes	116
a00000012.gdbindexes	116
a00000011.gdbindexes	116
a00000010.gdbindexes	116
a0000000f.gdbindexes	116
a0000000e.gdbindexes	116
a0000000d.gdbindexes	116
a0000000c.gdbindexes	116
a0000000b.gdbindexes	116
a0000000a.gdbindexes	116
a00000009.gdbindexes	116
a00000001.gdbindexes	110
a00000003.gdbindexes	42
gdb	4
NRC_Wetland_Stream_Deliverable.gdb (folder: 53 files)	--
a00000004.gdbtable	427,498
a0000000a.gdbtable	63,975
a00000004.freelist	37,208
a00000009.gdbtable	23,561
a0000000b.gdbtable	22,499
a00000007.CatItemTypesByName.atx	12,310
a00000004.spx	12,310
a0000000b.gdbtablx	5,152
a0000000a.gdbtablx	5,152
a00000009.gdbtablx	5,152
a00000007.gdbtablx	5,152
a00000006.gdbtablx	5,152
a00000005.gdbtablx	5,152
a00000004.gdbtablx	5,152
a00000003.gdbtablx	5,152
a00000002.gdbtablx	5,152
a00000001.gdbtablx	5,152
a0000000b.spx	4,118
a0000000a.spx	4,118
a00000009.spx	4,118
a00000007.CatItemTypesByUUID.atx	4,118

Folder / Filename	Size (bytes)
a00000007.CatItemTypesByUUID.atx	4,118
a00000007.CatItemTypesByParentTypeID.atx	4,118
a00000006.CatRelTypesByUUID.atx	4,118
a00000006.CatRelTypesByOriginItemTypeID.atx	4,118
a00000006.CatRelTypesByName.atx	4,118
a00000006.CatRelTypesByForwardLabel.atx	4,118
a00000006.CatRelTypesByDestItemTypeID.atx	4,118
a00000006.CatRelTypesByBackwardLabel.atx	4,118
a00000005.FDO_UUID.atx	4,118
a00000005.CatRelsByType.atx	4,118
a00000005.CatRelsByOriginID.atx	4,118
a00000005.CatRelsByDestinationID.atx	4,118
a00000004.FDO_UUID.atx	4,118
a00000004.CatItemsByType.atx	4,118
a00000004.CatItemsByPhysicalName.atx	4,118
a00000001.TablesByName.atx	4,118
a00000006.gdbtable	2,263
a00000007.gdbtable	1,705
a00000002.gdbtable	1,456
a00000003.gdbtable	1,189
a00000006.gdbindexes	602
a00000005.gdbtable	482
a00000001.gdbtable	438
timestamps	400
a00000005.gdbindexes	318
a00000004.gdbindexes	310
a00000007.gdbindexes	296
a0000000b.gdbindexes	116
a0000000a.gdbindexes	116
a00000009.gdbindexes	116
a00000001.gdbindexes	110
a00000003.gdbindexes	42
gdb	4