

**DEPARTMENT OF THE ARMY PERMIT EVALUATION  
AND DECISION DOCUMENT**

**TABLE OF CONTENTS**

- 1. Introduction**
  - 1.1. Authorities
  - 1.2. Permit Decision
  
- 2. Project Information (33 CFR Part 325.2)**
  - 2.1. Applicant
  - 2.2. Application No. NWK-2007-0133
  - 2.3. Project Location
  - 2.4. Existing Conditions
    - 2.4.1. Cadillac Lake Wetlands
    - 2.4.2. NewMarket
    - 2.4.3. East Side
  - 2.5. Project Description
  - 2.6. Jurisdiction
  - 2.7. Project Purpose
    - 2.7.1. Basic Project Purpose
    - 2.7.2. Overall Project Purpose
  - 2.8. Project Need
  
- 3. Public Notification (33 CFR Parts 320.3, 320.4 and 325.3)**
  - 3.1. Public Notice Date
  - 3.2. Public Information Meeting
  - 3.3. Respondents
    - 3.3.1. Federal Agencies
    - 3.3.2. State Agencies
    - 3.3.3. Local Agencies
    - 3.3.4. Other Organizations
    - 3.3.5. Individuals
  - 3.4. Substantive Issues, Applicant Reply and Corps Resolution
    - 3.4.1. Project Alternatives
    - 3.4.2. Flood Control Component/Drainage Studies/Hydrology Changes/Groundwater Concerns
    - 3.4.3. Water Quality
    - 3.4.4. Habitat Loss and Wetland Impacts
    - 3.4.5. Cumulative and Secondary Impacts
    - 3.4.6. Mitigation Plan
    - 3.4.7. Floodplain Impacts
    - 3.4.8. Corps Evaluation
    - 3.4.9. Adequacy of Jurisdictional Determination
    - 3.4.10. Comments Supporting Proposal
    - 3.4.11. Adverse Economic Impacts

### 3.5. Public Hearing Determination

## 4. Compliance with Other Laws

- 4.1. Section 7 of the Endangered Species Act
- 4.2. Section 106 of the National Historic Preservation Act
- 4.3. Section 401 Water Quality Certification
- 4.4. Executive Orders
  - 4.4.1. Order 11990 Protection of Wetlands
  - 4.4.2. Order 11988 Flood Plain Management
  - 4.4.3. Order 11898 Environmental Justice

## 5. Alternatives (NEPA 33 CFR Part 320.4(a)(2) / Section 404(b)(1), 40 CFR Part 230.10(a))

- 5.1. No action (permit denial)
- 5.2. Alternate offsite developments
- 5.3. Onsite Avoidance and Minimization Alternatives (preferred alternative)

## 6. Impact Evaluation

### 6.1. Results

- 6.1.1. Affected Environment
- 6.1.2. Special Aquatic Sites
- 6.1.3. Water Quality
- 6.1.4. Fish and Wildlife
- 6.1.5. Flood Hazards and Floodplain Values
- 6.1.6. Endangered Species
- 6.1.7. Cultural Resources and Historic Properties
- 6.1.8. Cumulative and Secondary Impacts
- 6.1.9. Consideration of Property Ownership
- 6.1.10. Energy Conservation and Development
- 6.1.11. Environmental Benefits
- 6.1.12. Economics
- 6.1.13. Navigation
- 6.1.14. Marine Sanctuaries
- 6.1.15. Traffic and Transportation Patterns
- 6.1.16. Noise
- 6.1.17. Safety
- 6.1.18. Land Use
- 6.1.19. Food and Fiber Production
- 6.1.20. Mineral Needs
- 6.1.21. Other Factors

## 7. Section 404(b)(1) Evaluation

- 7.1. Physical and Chemical Characteristics (Subpart C)
  - 7.1.1. Physical Substrate
  - 7.1.2. Suspended Particulates and Turbidity
  - 7.1.3. Water
  - 7.1.4. Current Patterns and Water Circulation

- 7.1.5. Normal Water Fluctuations
- 7.1.6. Salinity Gradients
- 7.2. Biological Characteristics (Subpart D)
  - 7.2.1. Threatened and Endangered Species
  - 7.2.2. Fish and Other Aquatic Organisms
  - 7.2.3. Other Wildlife
- 7.3. Special Aquatic Sites (Subpart E)
  - 7.3.1. Sanctuaries and Refuges
  - 7.3.2. Wetlands
  - 7.3.3. Mud Flats
  - 7.3.4. Vegetated Shallows
  - 7.3.5. Coral Reefs
  - 7.3.6. Riffle and Pool Complexes
- 7.4. Human Use Characteristics (Subpart F)
  - 7.4.1. Municipal and Private Water Supplies
  - 7.4.2. Recreational and Commercial Fisheries
  - 7.4.3. Water-Related Recreation
  - 7.4.4. Aesthetics
  - 7.4.5. Parks, National and Historic Monuments, National Seashores, Wild and Scenic Rivers, Wilderness Areas, Research Sites and Similar Preserves
- 7.5. Contaminant Evaluation and Testing (Subpart G)
  - 7.5.1. Evaluation of Dredged or Fill Material
  - 7.5.2. Chemical, Biological and Physical Evaluation
- 7.6. Actions to Minimize Adverse Effects (Subpart H)
  - 7.6.1. Actions Concerning the Location of the Discharge
  - 7.6.2. Actions Concerning the Material to be Discharged
  - 7.6.3. Actions Controlling the Material After Discharge
  - 7.6.4. Actions Affecting the Method of Dispersion
  - 7.6.5. Actions Related to Technology
  - 7.6.6. Actions Affecting Plant and Animal Populations
  - 7.6.7. Actions Affecting Human Use
  - 7.6.8. Other Actions
- 8. Mitigation**
  - 8.1. Applicant Proposal
  - 8.2. Mitigation Rationale
  - 8.3. Mitigation Function
  - 8.4. Mitigation Acceptance
- 9. Special Conditions**
  - 9.1. Mandatory by Regulation/Policy
  - 9.2. Project Specific
- 10. Determinations**
  - 10.1. Findings of No Significant Impact
  - 10.2. Section 404(b)(1) Guidelines Compliance
  - 10.3. Clean Air Act Conformity

#### 10.4. Public Interest Review

### 11. Signatures/Approvals

### 12. Attachments/Enclosures Index

- 12.1. Public Notice
- 12.2. Environmental Protection Agency letter (EPA), 27 February 2007
- 12.3. EPA letter, 28 June 2007
- 12.4. EPA letter, 14 November 2007
- 12.5. U.S. Fish and Wildlife Service (FWS) letter, 23 February 2007
- 12.6. FWS letter, 28 June 2007
- 12.7. FWS letter, 30 October 2007
- 12.8. Representative Todd Tiahrt letter, 8 August 2007
- 12.9. Kansas Department of Wildlife and Parks (KDWP) letter, 21 February 2007
- 12.10. KDWP letter, 28 June 2007
- 12.11. KDWP letter, 15 October 2007
- 12.12. Kansas Department of Agriculture, Division of Water Resources letter, 2 March 2007
- 12.13. Kansas State Historic Preservation Office letter, 16 May 2007
- 12.14. Carl Brewer, Mayor, City of Wichita letter, 26 June 2007
- 12.15. Jeff Longwell, City Council Office, City of Wichita letter, 6 August 2007
- 12.16. Sedgwick County Conservation District letter, 28 June 2007
- 12.17. Chadsworth Home Owners Association letter, 14 February 2007
- 12.18. Bradford Home Owners Association letter, 21 February 2007
- 12.19. Steven G. Sorensen, Kansas Wildlife Federation email, 25 February 2007
- 12.20. Ellie Skokan, Southwind Group, Kansas Chapter, Sierra Club email, 10 March 2007
- 12.21. Sierra Club letter, 16 March 2007
- 12.22. Sierra Club letter, 26 June 2007
- 12.23. Sierra Club letter, 18 October 2007
- 12.24. Jeff Bannon Auction and Realty, Inc. letter, 23 February 2007
- 12.25. Jeff Bannon Auction and Realty, Inc. letter, 2 June 2007
- 12.26. Flatland Investments, LLC letter, 26 June 2007
- 12.27. R. Patrick Ayars, Key Construction Inc. email, 29 June 2007
- 12.28. Ray Henderson letter, 7 February 2007
- 12.29. Ray Henderson email, 21 March 2007
- 12.30. William R. Pracht letter, 12 February 2007
- 12.31. Kathleen Henderson letter, 13 February 2007
- 12.32. Angie Bayliff email, 21 March 2007
- 12.33. Cam Woody email, 21 March 2007
- 12.34. Joyce Hart email, 20 June 2007
- 12.35. Darrel Hart email, 25 June 2007
- 12.36. Nick F. Martin letter, 26 June 2007
- 12.37. James Skolaut letter, 26 June 2007
- 12.38. Colonel David T. Dennis, USAF (Ret.) letter, 26 June 2007
- 12.39. Larry E. Bottenberg letter, 26 June 2007
- 12.40. Richard E. Brown email, 28 June 2007

- 12.41 Earl Callison email, 28 June 2007
- 12.32. Doug Hye email, 28 June 2007
- 12.43. Joe Kramer letter, 28 June 2007
- 12.44. Steven G. Sorensen email, 29 June 2007
- 12.45. Corps letter to applicants, 2 March 2007
- 12.46. Applicants response letter, 29 March 2007
- 12.47. Corps letter to applicants, 3 July 2007
- 12.48. Applicants response letter, 19 July 2007
- 12.49. Corps letter to applicants, 21 August 2007
- 12.50. Final Proposed Wetland Mitigation Plan, September 2007
- 12.51. George R. Kolb, City Manager, City of Wichita letter, 17 September 2007
- 12.52. Corps letter to applicants, 22 February 2008
- 12.53. Supplement to the Alternative Analysis for Proposed Drainage Improvement District, March 2008
- 12.54. Economic Analysis for Supplement to Alternative Analysis for Proposed Drainage Improvement District, March 2008
- 12.55. The Cadillac Lake Drainage Improvement District's Proposed Cadillac Lake and Cowskin Creek Wetland Mitigation Plan, March 2008
- 12.56. Arnall Golden Gregory LLP letter, 18 February 2008
- 12.57. Arnall Golden Gregory LLP letter, 7 March 2008
- 12.58. Matt Jeppson email, 11 March 2008
- 12.59. Foulston Siefkin LLP letter, 1 April 2008
- 12.60. Public Notice for Public Meeting, 10 May 2007
- 12.61. Public Meeting transcript, 19 June 2007
- 12.62. Endangered species survey submitted by applicants to FWS, 7 August 2007
- 12.63. FWS response to applicants regarding endangered species survey, 20 August 2007
- 12.64. Corps email on ESA consultation to FWS, 18 March 2008
- 12.65. FWS email consultation concurrence, 1 April 2008
- 12.66. Kansas Department of Health and Environment Water Quality Certification, 4 April 2008

1. **Introduction.** This is a Department of the Army (DA) permit decision document. This document addresses the requirements contained in the National Environmental Policy Act (NEPA) of 1969 and the Section 404(b)(1) Guidelines (Guidelines) published at 40 CFR Part 230.

- 1.1. Authorities. This decision is issued under Section 404 of the Clean Water Act (33 USC 1344). This review was conducted in accordance with the procedures described at 33 CFR Part 320-331, including Appendices B and C.
- 1.2. Permit Decision. I have reviewed and evaluated the subject DA permit application, in light of the overall public interest, the environmental, social, engineering, and economic considerations, and in accordance with the laws, regulations and policy cited above. I have decided to authorize this DA permit with special conditions.

## 2. Project Information.

### 2.1. Applicants:

City of Wichita  
455 North Main Street  
Wichita, Kansas 67202

NewMarket V, LLC  
727 North Waco, Suite 400  
Wichita, Kansas 67203

East Side Investments, LLC  
8110 East 32<sup>nd</sup> Street, Suite 150  
Wichita, Kansas 67226

### 2.2. Application No.: NWK-2007-00133

2.3. Project Location: The project is located in wetlands known as Cadillac Lake, on both the east and west sides of Maize Road in the northeast  $\frac{1}{4}$  of the northeast  $\frac{1}{4}$  of Section 6, and the southern  $\frac{1}{2}$  of the northwest  $\frac{1}{4}$  of Section 5, all in Township 27 south, Range 1 west, in the City of Wichita, Sedgwick County, Kansas (Latitude: 37.73373, Longitude - 97.46268).

2.4. Existing Conditions: The project is located in the Cadillac Lake wetlands that include two main properties the NewMarket V (NewMarket) parcel and East Side Investments (East Side) parcel that will be divided with portions donated to the City of Wichita. Below is a discussion of the Cadillac Lake wetlands that includes properties outside of the scope of this project and discussions of the two properties that are within the scope of the project.

2.4.1. **Cadillac Lake Wetlands.** Cadillac Lake is a unique wetland complex in Kansas

that is a large playa-type basin wetland, believed to have formed by subsidence or sink hole formation, and has an approximately 2,300 acre watershed. Historically, the basin was closed with no natural outlet. However, in recent times, a small drainage ditch approximately 1/2 mile long was excavated southward and connected Cadillac Lake to the west fork of Rolling Hills Creek. The ditch has a discernable ordinary high water mark and functions as a tributary capable of discharging 80 cubic feet of water per second (cfs) into the Chadsworth subdivision storm water retention lake (an impoundment of the ditch/Rolling Hills Creek). The lake discharges into Rolling Hills Creek (also known as West Link) which flows into Cowskin Creek, the Wichita Valley Center Arkansas River Diversion, and then into the Arkansas River. The Cadillac Lake wetlands are unique wetlands found in an urban setting. Many of the wetland plant species found during the wetland delineation are annuals and opportunistic species. The wetlands vegetation is successional and possess functions that vary based on seasonal changes in climactic precipitation that influence local hydrology. The wetlands have been documented to provide habitat for a variety of bird species, for amphibian and reptilian species, as well as flood storage and water filtration in a location where historical wetland losses have been well documented.

2.4.2. **NewMarket Parcel.** This parcel is located in an approximately 28-acre tract that is bound on the south by commercial properties, on the west by residential and agricultural land, on the north by undeveloped land and 29<sup>th</sup> Street North, and on the east by Maize Road. The site is nearly level, encompassed by a depressional landform defined by the 1,350-foot elevation contour. A small impoundment is located in the northern portion of the tract. A drainage channel approximately 30-feet in width runs north to south near the center of the parcel. Surface drainage of this tract appears to flow to the south where it is conveyed easterly under Maize Road by a culvert, and onto the East Side parcel. Accordingly, the hydrology is greatest in the southern portion of the property. Approximately 12.8-acres of emergent wetlands are located on this parcel, predominantly on the eastern side. A forested tree row occurs on the parcel oriented in a north to south configuration near the center of the parcel. Water flow enters the parcel from the north via a culvert under 29<sup>th</sup> Street North, and from its south side drainage ditch. The west side Maize Road drainage ditch also flows into this parcel.

2.4.3. **East Side Parcel.** This 80-acre parcel will be divided between the City of Wichita and the East Side development. The East Side development will be located on the westernmost portion of the parcel that is 26 acres in size and the City will own the eastern side of the parcel that is 54 acres in size. This entire parcel is approximately 80 acres and is bound on the south by the Chadsworth residential development, on the east by the Bradford residential development, on the north by agricultural land, and on the west by Maize Road. This site falls within a depressional landform and is nearly level with the exception of a fill pad for a home site located on the west side of the parcel. Approximately 28.5-acres of emergent wetlands and approximately 5-acres of open water are located on this parcel. Water primarily enters this site from the NewMarket site via the Maize Road culvert at the

northwest corner of the parcel, and the east side Maize Road drainage ditch. Further drainage enters this parcel at its northeast corner, and from the Bradford residential community to the east. Water exiting this parcel discharges south through a channel and flows through a culvert under West Chartwell Street to the Chadsworth residential community detention ponds. The final project divides the East Side parcel into two separate parcels, one for flood control and mitigation and one for commercial development.

- 2.5. Project Description: The applicants propose to discharge clean fill material into 12.24 acres of wetlands to construct the commercial portions of the project. Temporary wetland impacts will occur in approximately 0.14 acres of wetlands in order to construct a temporary haul road. These temporary impacts will be restored once the project is completed. The project components are discussed below.

The NewMarket portion of the project will impact 7.84 acres of wetlands through general fill activities for construction of 88,000 square feet of commercial properties with associated parking. This parcel also includes excavation of a detention basin that will impact approximately 0.69 acres of wetlands. The detention basin is a part of the comprehensive stormwater management plan to relieve flooding of the Chadsworth residential community. Total project wetland impacts on the NewMarket parcel will result in the loss of 7.84 acres of wetlands.

The East Side portion of the project will result in the filling of 4.4 acres of wetlands for construction of a Lowes retail store, five out-lots, and separate in-line commercial retail spaces along with associated parking. The remainder of the East Side property will be donated to the city for the flood control aspect of the project and for a portion of the compensatory mitigation.

The commercial development will provide the means to the City of Wichita for construction of stormwater detention within the Cadillac Lake drainage area. A Drainage Improvement District will be created that includes public and private land. The project will include the construction of two dry detention basins to help alleviate flooding in the Chadsworth residential community downstream of the project. The dry detention basins will not impact jurisdictional waters. Approximately 0.3 acres of wetlands will be filled in order to construct a public parking lot for future recreational and educational opportunities.

- 2.6. Jurisdiction: An approved Jurisdictional Determination (JD) was completed in 2005. The JD concluded that 28.5 acres of wetlands located on the East Side parcel and 12.8 acres of wetlands on the NewMarket parcel are jurisdictional waters for a total of 41.3 acres of wetlands on the entire project footprint. The jurisdictional determination for this project was made prior to the 5 June 2007 National Guidance on Clean Water Act jurisdiction. Although the applicants declined the opportunity to have a jurisdictional determination complete under the 5 June 2007 guidance, the Corps has determined that the wetlands abut Rolling Hills Creek, and considered with the relevant reach of Rolling Hills Creek, have a significant nexus to the Arkansas River (Traditional Navigable

Water). The Cadillac Lake wetlands are documented to flow into Rolling Hills Creek then to Cowskin Creek and finally to the Arkansas River. The June 22, 2005, "Re-Evaluation Report for the Appealed Pearson Jurisdictional Determination" completed by the U.S. Army Corps of Engineers, Kansas City District documents this hydrologic connection to a Traditionally Navigable Water and shows a significant nexus to the Arkansas River.

## 2.7. Project Purpose

2.7.1. Basic Project Purpose: The applicants propose to utilize two parcels of land for commercial development and storm water detention.

2.7.2. Overall Project Purpose: The proposed commercial development would provide the means (land and funding) to the City of Wichita for construction of storm water detention within the Cadillac Lake drainage area. The detention would address existing flooding in the downstream Chadsworth Subdivision (and other properties downstream), offset the stormwater impacts of the commercial development, and provide future capacity for upstream development.

2.8. Project Need: Information provided by the applicants indicates the need for additional storm water detention due to anticipated development within this drainage area and to alleviate flooding problem in the Chadsworth Subdivision. The applicants have adequately documented the need for this project as described in Section 5 of this document.

## 3. **Public Notification**

3.1. Public Notice Date: 26 January 2007. Expiration Date: 16 February 2007, (Enclosure 12.1). At public request, the comment period was extended for a full 30 days to 25 February 2007.

3.2. Public Information Meeting: A public information meeting was held on 19 June 2007, in Wichita, Kansas. Comments received from this meeting are included in the discussion in this section.

### 3.3. Respondents:

#### 3.3.1. Federal Agencies:

- U.S. Environmental Protection Agency (EPA) (Enclosures 12.2, 12.3 and 12.4)
- U.S. Fish and Wildlife Service (FWS) (Enclosures 12.5, 12.6 and 12.7)
- U.S. House of Representatives, Honorable Todd Tiahrt (Enclosure 12.8)

#### 3.3.2. State Agencies:

- Kansas Department of Wildlife and Parks (KDWP) (Enclosures 12.9, 12.10 and 12.11)

- Kansas Department of Agriculture, Division of Water Resources (DWR) (Enclosure 12.12)
- Kansas State Historical Preservation Office (Enclosure 12.13)

### 3.3.3. Local Agencies:

- City of Wichita (Enclosures 12.14 and 12.15)
- Sedgwick County Conservation District (Enclosure 12.16)

### 3.3.4. Other Organizations:

- Chadsworth Home Owners Association (Enclosure 12.17)
- Bradford Homeowners Association (Enclosure 12.18)
- Kansas Wildlife Federation (Enclosure 12.19)
- Sierra Club (Southwind Group) (Enclosures 12.20, 12.21, 12.22 and 12.23)
- Jeff Bannon Auction and Realty, Inc. (Enclosures 12.24 and 12.25)
- Flatland Investments, LLC (Enclosure 12.26)
- Key Construction Inc. (Enclosure 12.27)

3.3.5. Individuals: Seventeen individual comments, two including petitions with numerous signatures, were received regarding the proposed project (Enclosures 12.28 through 12.44).

3.4. Substantive Issues, Applicants Reply and Corps Resolution: Following the public notice comment period and the public meeting comment period, public comments were furnished to the applicants for their opportunity to respond, resolve or rebut those comments (Enclosures 12.45 and 12.47). The applicants' responses are contained in Enclosures 12.46 and 12.48.

We issued a follow up request to the applicants for an additional consideration of alternatives and mitigation issues (Enclosure 12.49) and the applicants responded with a submittal of their draft mitigation plan (Enclosure 12.50) and supplemental mitigation consideration (Enclosure 12.51).

We issued a final letter to the applicants with a preliminary determination that the project did not meet the Section 404(b)(1) alternatives and requested an analysis that documents the project is the least environmentally damaging practicable alternative (Enclosure 12.52). The applicants' responded with a series of supplemental information to the alternatives analysis. (Enclosures 12.53 - 12.59).

Substantive issues resulting from the public interest review are discussed below.

3.4.1. **Project Alternatives.** Many commenters are concerned that project alternatives were not evaluated and suggested that less environmentally damaging alternatives exist. The EPA concluded that the proposed project does not comply with the Section 404(b)(1) Guidelines (Guidelines). EPA continued that is not "water dependent" in that the placement of fill material into wetlands; is not

necessary to meet the basic project purpose. They contend that neither the creation of a drainage improvement district nor retail development requires siting in waters of the United States. In accordance with the Guidelines, non-water dependent projects are presumed to have alternatives that would not impact a special aquatic site.

Alternatives suggested included restoration of the Cadillac Lake wetland complex and watershed planning incorporating "Low Impact Development," "Smart Growth," and other similar concepts. EPA identified some granting opportunities for such alternatives. Additional commenters suggested different configurations that included incorporation of the remaining portion of the wetland complex (Pracht and Bannon properties) into the plan. Other commenters recommended separating the commercial development component from the flood control component for the alternatives analysis. Other commenters suggested that offsite upland locations are available to development that should be analyzed.

**Applicant Response.** The applicants stated that detention is necessary immediately north of the Chadsworth residential community because it is the lowest point available in the drainage basin. The applicants responded that the project purpose is to provide the City with additional detention capacity necessary to alleviate the existing and future flooding problem and to allow commercial development that will provide the land and a significant portion of the funding to construct the detention basin.

The applicants rejected any severing of the commercial development from the flood control aspects. They described the economic value gained from building commercial property on the wetlands as the only viable option for funding the flood control purpose. The applicants stated that they believe the only practicable location is in the wetlands and that the activity is "water dependent".

**Corps Evaluation.** We concur that additional alternatives were available to the applicants and stressed this throughout the entire permitting process. We requested the applicants to avoid and minimize Cadillac Lake wetland impacts to the maximum extent practicable. These comments and our request led the applicants to respond with a series of design changes that ultimately avoided an additional 6.12 acres of the requested 18.5 acres of wetland fill activities. The overall project will result in the loss of approximately 12.24 acres of wetlands. The project encompasses a total of 108 acres and of the 108 acres; 41.30 acres were determined to be jurisdictional wetlands. The overall project will avoid 29.04 acres of the 41.30 acres of wetlands in the project area.

The alternative suggested to restore the Cadillac Lake wetland complex was attempted in the early 1990s, when a coalition known as the Pracht Wetlands Task Force attempted to acquire all of the Cadillac Lake wetlands to preserve and manage the wetlands as a public recreational area. In August 1994, the coalition

was incorporated as a non-profit organization called the Pracht Wetland Preserve, Inc. The attempts of this organization failed and no annual report has been filed since 1996. We determined that this is not a reasonable alternative.

We determined that the applicants adequately documented in their alternative analysis that all three components of the development are integrally related, and that if one aspect of the project is not implemented, the entire project would be abandoned; however, even if all three components of the project were not integrally related, the applicants have shown for each project component that it would not be practicable to move completely offsite and still meet the project purpose. We determined that the applicants have adequately demonstrated that the project is the least environmentally damaging practicable alternative in light of overall project purposes. This determination takes into consideration all reasonable onsite and offsite alternatives that include the Pracht and Bannon properties. The Corps assessments and final conclusions about project alternatives are documented in Section 5 below.

**3.4.2. Flood Control Component / Drainage Studies / Hydrology Changes / Groundwater Concerns.** Many of the commenters are concerned with the adequacy and functions of the flood control component of the proposed project. Many commenters also expressed concern about the adequacy of the drainage studies. There are concerns that the engineering for the flood control component is inadequate. There are also concerns that the detention basin cells would not be able to store comparable amounts of water to the existing wetlands. Several commenters are concerned that the detention basins will not function because of the high water table. Several commenters are also concerned that this project may impact the Tulsa District Cowskin Creek Project. Commenters are also concerned that the grading work associated with the detention basins could cause subsidence problems in the area since the wetlands originally formed as a result of a sinkhole. One commenter requested that an independent hydrologic study be completed for the project. In addition, there are concerns with the effectiveness of pumping associated with the detention basins and the concern with relying on pumps that could potentially fail.

**Applicant Response.** The applicant responded that two separate independent engineering studies for the Cadillac Lake watershed have been completed and that additional studies are not necessary. The applicant states that both of the studies reached the same conclusion; that the storage capacity provided by the existing wetlands is not sufficient to provide the necessary flood protection to the existing downstream residential development. The applicant contends that the proposed detention will be adequate for flooding concerns downstream. The applicant also contends that none of the reviewing agencies have provided an engineering study or evidence that is contrary to the findings of the PEC study and that the comments are only opinions that are unsubstantiated. The applicants responded that the pump is necessary to restore the detention capacity of the detention ponds on the west side of Maize Road following a flow event. The

applicants responded that the proposed project would result in a lower discharge flow than the current conditions which they state would benefit the Cowskin Creek flood control project. The applicants responded that geotechnical borings taken near the proposed detention basin show that subsidence and groundwater is not a concern for the proposed project.

**Corps Evaluation.** The Corps generally does not evaluate drainage studies from an engineering perspective in our analysis to issue or deny a DA permit. We determined that a requirement for an independent hydrologic study was not justified for this project based on the prior two drainage studies completed for the City. The Corps; however, has not evaluated the drainage studies from an engineering perspective and does not endorse these reports. The City is endorsing the flood control aspect of this project in efforts to protect the property owners within their jurisdiction. We will defer to the City's contracted certified engineering analysis for purposes of this DA permit. The Corps will also defer to the applicant's geotechnical analysis for determining the suitability of building at this location due to potential subsidence. We have analyzed the drainage studies to ensure that this project results in the least environmentally damaging practicable alternatives.

The Tulsa District was contacted about potential impacts to the Cowskin Creek Project and they advised that any work being conducted that could result in changes upward to their baseline flow calculations would be a cause for concern. Based on the applicant's response and the PEC study, the project should not result in changes upward to the baseline flow calculation to negatively impact the Tulsa District's Cowskin Creek Project.

- 3.4.3. **Water Quality.** Several commenters cited potential adverse impact to water quality as a consequence of the proposed project. One commenter noted that the project area flow path takes surface water runoff about 3.5-miles downstream to Cowskin Creek and the Arkansas River, and reported that both waters are listed as impaired on the 303(d) list. Cowskin Creek is impaired for total suspended solids and has biological impairments. Phosphorus loading is also a recent concern. The Arkansas River is impaired for chloride, lead, copper, sulfate and Chlordane. Some commenters stated beliefs that the proposed project would either not provide the same level of pollutant filtering and treatment as the existing system, or that there would be a lag time before the filtering of the proposed project system would begin to function. Others stated that sediment laden waters from upstream would be directed and concentrated in the wetlands, leading to their functional impairment and the accumulation of pollutants in the sediments. Concerns over contamination of the wetlands and the groundwater within the project area were expressed by another commenter. One commenter was also concerned about a decommissioned oil well located in the area proposed for detention. Their concern is that water in the detention basin could degrade the cap on the decommissioned well which could then release oils to further degrade water quality in the watershed.

**Applicant Response.** The applicants responded to water quality comments stating that the majority of storm water entering the wetlands or detention basin will travel through a series of detention basins prior to entering the proposed dry detention basins or the existing wetlands, and as such would be considered “pretreated.”

The applicants contend that regulations currently in place by local, state, and federal agencies address the issue of siltation in the watershed. They further explain that best management practices will be in their Storm Water Pollution Prevention Plan described in their NPDES storm water permit and that mitigation measures to improve water quality storm water runoff will be adopted as part of the overall development. They do not believe that their development will contribute to the siltation problems in the watershed. They explain that as the watershed becomes further developed overall siltation in the form of Total Suspended Solids and sedimentation will be reduced as fewer acres in the watershed are tilled for agriculture.

The applicant further rebutted these comments by stating that the wetlands are already recognized by the KDHE as being impaired primarily due to eutrophication, and that impairment of the wetlands will continue regardless of the applicant’s proposed project. The applicant contends that the preserved wetlands onsite and the proposed mitigation will function similarly to the existing wetlands.

The applicant provided the following list of BMPs that will be implemented to minimize water quality impacts associated with this project:

- \* Rubber roofs will be installed on all buildings
- \* Vortex stormwater system is be used at the EastSide development. There is insufficient space for a Vortex system on the NewMarket property
- \* Grass-covered water ways
- \* Non-chloride deicers will be use on the parking lots
- \* Street sweepers for the parking lots
- \* Stormwater detention basins

**Corps Evaluation.** The Corps acknowledges that other programs are in place to evaluate the project’s impacts on water quality and will defer to these agencies; however, water quality is a public interest review factor that we evaluate in our permit process. The water quality certification provided by KDHE, whose primary review of this project is focused on water quality issues, is a condition of this permit and should insure that negative impacts to water quality in the watershed are minimized.

The Corps considered water quality concerns this project would have on the impaired Arkansas River and on Cowskin Creek. The primary water quality

concerns impacting this watershed are not associated with aspects of this project. Most of the impairment concerns are associated with mining and agricultural activities in the watershed. The main concerns for this development would be oils and greases from the parking lots and chlorides used as deicers on the parking lots and as discussed above, the applicants are proposing to use non chloride deicers and to use a Vortex stormwater system to minimize the oils and greases that flow off of pavement. We do anticipate minor water quality impacts associated with this project in both the construction phase and operational phase of this project; however, BMPs should greatly minimize the impacts. We believe proposed restoration and improvements associated with the onsite and offsite wetland mitigation should adequately offset negative impacts to water quality caused by this project. In addition, the applicant's proposed water quality BMPs have been incorporated into the proposed mitigation plan.

- 3.4.4. **Habitat Loss and Wetland Impacts.** Several commenters noted that the proposed project would result in habitat loss to migratory birds, amphibians, reptiles, and other terrestrial animals. In addition, KDWP has designated Cadillac Lake as Crucial Wildlife Habitat. Many commenters are also concerned with the lost functions of the proposed wetlands impacts. Additional commenters stated their concern over the change in hydrology due to the filling of the wetlands.

**Applicant Response.** The applicant proposed mitigation in response to the wetland impacts associated with this project.

**Corps Evaluation.** Based on the PEC study, it is not anticipated that a change in hydrology will occur because of the filling of the wetlands. We believe that the proposed mitigation adequately offsets the direct and indirect wetland impacts and habitat loss associated with this project. The proposed mitigation should offset habitat loss to migratory birds, amphibians, reptiles, and other terrestrial animals. We also anticipate other wetland functions will be replaced with the mitigated wetlands. Additional information on the mitigation is available in Section 8 of this document.

- 3.4.5. **Cumulative and Secondary Impacts.** Many commenters were concerned with the cumulative and secondary impacts to the Cadillac Lake Wetlands and with secondary impacts associated with the development. EPA commented that 48% of the wetlands in the HUC 8 have been lost through past land use practices. Concerns also exist that the construction of the detention basin would dewater the remaining wetlands in the complex. Concerns also exist that the project would change hydrology to and degrade the remaining wetlands not directly impacted by the development. Commenters also are concerned with activities in the past that impacted the Cadillac Lake wetlands.

**Applicant Response.** The applicants responded that the wetlands on the Pracht

property should not be impacted by the proposed project because no fill material would be placed into these wetlands. They also concluded that the PEC Drainage Study showed that there would be no significant effect on the hydrology of the Pracht wetlands. The applicant contends that mitigation monitoring plan will ensure that negative secondary impacts will not occur in the remaining wetlands. They noted that past attempts to protect the wetlands have failed based on a lack of funding. They contend that the proposed project would preserve, enhance, and manage a large portion of the remaining wetlands.

**Corps Evaluation.** Cumulative and secondary impacts have been assessed in Section 6.1.8 of this document. According to the information provided by the applicant's consultants, we believe that adequate hydrology is onsite and this project should not negatively impact the remaining Pracht property or the mitigated wetlands. To ensure this a biannual monitoring requirement will be required of the mitigation.

**3.4.6. Mitigation Plan.** Many commenters are concerned that the original proposed mitigation is inadequate both functionally and quantitatively. Commenters are concerned that the proposed mitigation does not functionally replace habitat for migratory bird species that utilize the wetlands. Commenters are also concerned that the mitigation does not address the temporal lag for wetland functions lost. There are also concerns that compensatory mitigation is being proposed in the detention basin areas of the development. One commenter is concerned that the mitigation includes non-native plants. One commenter requested the Corps to not allow construction until compensatory mitigation is 75% functional. There are also concerns about the ability to construct successful mitigation. One commenter requested that an additional 20-acres of wetland mitigation be required. One commenter requested that the mitigation areas be independent of artificial sources of water, such as pumping. A commenter suggested that a 50-foot upland buffer is inadequate and that a 300-500 foot buffer is necessary. A commenter is concerned that the maintenance is inadequate. One commenter recommended a 2:1 ratio of wetland creation to wetland impacts. One commenter requested we not allow the enhancement of onsite wetlands be included as mitigation credit. A commenter is concerned that the Cowskin Creek mitigation site is already CRP land and already is wetlands.

**Applicant Response.** The applicant responded that it was not feasible to require the mitigation be 75% function prior to beginning construction because of the costs associated with this requirement. They state that this requirement would not allow the applicants to achieve their project objectives because development delays would increase cost and make the project economically infeasible. They also contend that development delays could harm the mitigated wetlands based on plantings being more sensitive in their early stages of their development. The applicants contend that there is sufficient hydrology for the mitigation and that monitoring and maintenance would ensure success of the mitigation site. The

applicants also stated that they modified the planting list to include only native plantings. The applicants responded that the mitigation will not be dependent on artificial sources of water and that sufficient hydrology is available onsite at each mitigation site. The applicants responded that pumping of water from the existing detention ponds located west of Maize Road is important in the overall effective reduction of flooding potential. The purpose of pumping water from the west side to the east is to restore the detention capacity in those detention ponds on the west side of Maize Road, not to artificially irrigate the wetlands.

**Corps Evaluation.** Based on public involvement the Corps determined that the original proposed mitigation was inadequate and determined that the appropriate mitigation ratio should be a 2.5:1 (wetlands mitigated to wetlands impacted). This determination is based on anticipated lag of functions and values of the replaced wetlands and gave preference to re-established / created wetlands as mitigation rather than enhancement of existing wetlands. The applicants responded with an acceptable mitigation plan that includes an additional 20-acres of wetland mitigation located within the watershed at the Cowskin Creek site. The Cowskin Creek site has small segments of interspersed wetlands on the property though there is ample area to develop the 20-acres of wetlands. We believe a 50-foot upland buffer is adequate and that it is unreasonable to require a 300-500 foot upland buffer when the goal of the mitigation is to offset wetland impacts. We determined that enhancement is an acceptable form of mitigation for this project though the credit received for the enhancement is considerably less than the creation credit. Additional information on the project mitigation can be found in Section 8 of this document.

- 3.4.7. **Floodplain Impacts.** A commenter stated that the subject proposal will occur in a floodplain, and noted that promoting development within a floodplain is in direct opposition to Executive Order 11988 Flood Plain Management.

**Applicant Response.** The applicants responded that the proposed storm water detention basin component of the project is essential to the protection of Chadsworth subdivision, and cited the PEC drainage study that concluded that the proposed detention basin is at the optimal location to control flooding into Chadsworth subdivision. In addition, the applicant responded that they will acquire the necessary floodplain permits necessary to develop this project.

**Corps Evaluation.** We reviewed applicable Federal Emergency Management Agency (FEMA) floodplain maps for the proposed project site and the site falls within FEMA Flood Zone A, (areas of 100-year flood; base flood elevations and flood hazard factors not determined). The Corps Regulatory Program responsibilities under this Executive Order are to avoid authorizing developments whenever practicable alternatives exist outside the floodplain, and if there are no such practicable alternatives, to consider alternatives within the floodplain which will lessen any significant adverse impact to the floodplain. We determined that

the applicant adequately minimized impacts to the maximum extent practicable and that this project is in compliance with Executive Order 11988 Flood Plain Management.

- 3.4.8. **Adequacy of Jurisdictional Determination.** Many commenters are concerned with the adequacy of the jurisdictional determination completed for this project. Many of the commenters contend that the wetland delineation under mapped wetlands onsite and that the wetland complex is actually larger. There are also concerns that some of the delineation forms are filled out in error.

**Applicant Response.** The applicant responded that the wetland delineation was completed in accordance with the 1987 US Army Corps of Engineers Wetland Delineation Manual, and that the Corps concurred with the delineated wetland boundaries. The applicant also commented that they disagreed with our wetland delineation and that they believe less wetlands are actually located on the site.

**Corps Evaluation.** The Corps approved the delineation provided by the applicant and believes the boundary to be accurate. Minor typographical errors may be present in the delineation forms; however, the Corps believes that the boundary of the delineation is accurate.

- 3.4.9. **Comments Supporting Proposal.** Comments were received that stated their support for the proposed project due to the critically needed flood protection. The City of Wichita stated the proposed location of the detention facility has been well documented as being the only location for providing flood control, preserving the existing wetlands, and providing a financial solution that is economically viable for the public. The primary benefit to the City is promotion of growth of the City's property tax base and, in concert with the private sector, to construct needed public improvements without the use of general obligation funds. They stated that it is not financially feasible for the City of Wichita to construct this project without the land donation and financial participation of the private sector.

**Applicant Response.** No response.

**Corps Evaluation.** The comments of the Mayor, City of Wichita; The City Council Office, City of Wichita; The District V Advisory Board Chairman, City of Wichita; and members of the public, in support of the proposed project, have all been given full consideration.

- 3.4.10. **Adverse Impacts to the Bannon Property.** A commenter is concerned that adverse economic impacts will occur because this project did not include his property (the Bannon Property) in the applicants' development plans. The commenter is also concerned that the development will result in four to eight feet of fill material along three sides of the his property.

**Corps Evaluation.** The applicants did not include the Bannon property in their proposed plans and there is no provision in our regulations that requires the applicants to do so. We did evaluate in our offsite alternatives analysis the practicability of offsite alternatives in order to minimize adverse impacts associated with the proposed project. See Section 5.2 of this document for detailed discussion of offsite alternatives.

In addition, wetlands are likely present on the property in question and we believe that including this property in the development would potentially result in greater impacts to waters of the U.S. A formal jurisdictional determination has not been completed on the Bannon property. If the owner of the Bannon property wishes to develop the property and impact waters of the U.S., they will be required to apply for a permit. We do not believe issuance of this permit precludes the owner of the Bannon property from developing the property. At this time a permit application has not been submitted for review.

We also reviewed potential adverse flooding impacts on the Bannon property associated with the applicants' project. This project is in a FEMA floodplain and may not adversely impact adjacent properties including the Bannon property. We will defer to the appropriate agencies in reviewing floodplain permitting requirements. For this project the agencies reviewing the floodplain fills are the Kansas Department of Water Resources and the City of Wichita.

- 3.5. Public Hearing Determination (33CFR Part 327): Requests for a public hearing were received by the Corps during the initial Public Notice comment period. In consideration of the information in the requests, and the purpose of the requests, the Corps held a Public Meeting in lieu of a formal public hearing. We believe this format provided for greater exchange of information and best addressed the public requests. The meeting was announced by a Public Notice dated 10 May 2007 (Enclosure 12.60) for the Public Meeting held on 19 June 19 2007, near the project site in Wichita Kansas. A transcript of the public meeting was prepared, and made available to the public by web posting (Enclosure 12.61). Public comments were accepted for a 10 day period following the meeting. All comments provided at the public meeting, and received in the subsequent comment period, are discussed in Section 3 above.

#### 4. Compliance with Other Laws.

- 4.1. Section 7 of the Endangered Species Act: In the initial public notice (Enclosure 12.1), the Corps stated the preliminary determination that the described work would not affect species designated as threatened or endangered or adversely affect critical habitat. In a written response (Enclosure 12.6), the FWS provided information that the proposed activity is located within the range of the Federally listed threatened piping plover (*Charadrius melodus*), and endangered least tern (*Sterna antillarum*). The FWS reported recent sightings of both species within the project area and recommended that a study be completed to determine if either species utilize the project area for nesting or

foraging.

A study was completed in August 2007 (Enclosure 12.62) and failed to locate suitable nesting habitat or the presence of either species during the survey period. FWS responded (Enclosure 12.63) that they concurred with the findings in the report. The FWS also requested that if impacts to the surface water impoundments on the site are expected to occur during the normal tern and plover breeding season, typically late May through July, a second survey for the presence of these birds should be completed just prior to the expected disturbance. The FWS also requested a second nesting survey if drought or other water level fluctuations expose open shoreline.

We responded to the FWS in an email (Enclosure 12.64) that we believed that proposed activity is not likely to adversely affect the least tern and/or piping plover and proposed the following condition: *"This permit does not authorize you to take the Federally listed interior least tern (Sterna antillarum) and/or piping plover (Charadrius melodus). If any impacts to the surface water impoundments on the site occur between May 15 through July 31, a survey for the least tern and piping plovers must be completed prior to beginning the work. If water level fluctuations expose open shoreline, a survey for nesting activity must be conducted prior to beginning work. All required surveys must be submitted to this office and you must receive approval to commence work prior to construction in a surface water impoundment onsite. You must immediately cease work and contact this office if either of the avian species are found during a survey. If work associated with this project will not take place in surface water impoundments between May 15 and July 31, no additional surveys will be required."*

The FWS concurred in an email (Enclosure 12.65) that the project is not likely to adversely affect the least tern and/or piping plover provided the applicant comply with the proposed condition.

The above condition will be a condition of the permit and concludes consultation requirements under Section 7 of the Endangered Species Act. If either of the species is found in any future surveys and we determine that the activity may effect the species we will coordinate further with the FWS.

- 4.2. Section 106 of the National Historic Preservation Act: The National Register of Historic Places and the Federal Register have been checked to determine if any properties listed or proposed for listing in the National Register would be impacted by the project. In addition, the State Historic Preservation Officer has been contacted to determine if any properties eligible or potentially eligible for listing in the National Register would be impacted by the work.

In response to the Kansas City District's inquiry, the Kansas State Historical Society provided the District with a written response dated 16 May 2007 (Enclosure 12.13), which states that the proposed project would have no effect on any property listed on the National Register of Historic Places nor any historic or archeological site listed in the state inventory. The Kansas City District's evaluation of potential impacts to

historic properties indicates that the project would not impact any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. No reconnaissance survey, to identify historic properties, has been conducted by the Kansas City District or the applicants.

Based on the District's findings no survey will be required since no recorded properties exist in the affected area and since it is unlikely that any unknown properties exist in the permit area due to the nature of the terrain. The District presumes that no historic properties are present within the permit area since the depression nature and hydrology of the site is not conducive to human habitation and no information is available which indicates that such properties are present.

4.3. Section 401 Water Quality Certification: The Kansas Department of Health and Environment certified in accordance with Section 401 of the Clean Water Act (33 USC 1341), that the work would not violate applicable water quality standards (Enclosure 12.66). This certification contains several conditions which address water quality concerns. The applicant will be informed by the proposed permit transmittal letter that the conditions presented in this certification are incorporated into the special conditions of the Department of the Army permit by reference, as stated in General Condition "5" of the permit document.

4.4. Executive Orders:

4.4.1. Order 11990 Protection of Wetlands: The decision described in this document is consistent with this executive order.

4.4.2. Order 11988 Flood Plain Management: As discussed above, the decision described in this document is consistent with this executive order.

4.4.3. Order 11898 Environmental Justice: The decision described in this document is consistent with this executive order.

5. **Alternatives (NEPA and Section 404(b)(1))**. NEPA requires the rigorous examination of all reasonable alternatives, including the alternative of no action, based upon the project purpose and need. The Section 404(b)(1) Guidelines prohibit regulated discharges where there is a less environmentally damaging practicable alternative that meets the project purpose. Furthermore, where the activity does not require siting in a special aquatic site to achieve its project purpose, less damaging alternatives are presumed to exist. Project purpose and need are described above in Sections 2.7 and 2.8. Through scoping associated with the public interest review we identified habitat loss, impacts to wetlands, and water quality concerns as the primary environmental impacts identified with this project. For each alternative discussed below, the more wetland avoidance directly lessens negative impacts to habitat loss, wetlands, and water quality.

5.1. No Action (permit denial): This alternative would not meet the basic or overall project purpose. This alternative would result in no direct impacts to the Cadillac Lake

wetlands. Denying the permit would result in no direct habitat loss and would contribute to no direct water quality issues downstream. Continued man induced degradation of the wetlands would likely occur due to unregulated future development in the watershed. The existing wetlands would continue to provide some level of natural flood protection by retaining stormwater, but current flooding concerns would not be addressed and future development in the watershed would likely worsen downstream flooding. The applicants have adequately documented that they are proposing the least environmentally damaging practicable alternative. This alternative is not the preferred alternative.

- 5.2. Alternative Offsite Developments: This alternative would place the portions of the commercial development in adjacent or nearby uplands with the portions of the flood control detention constructed at one or more upstream locations.

The applicants have adequately demonstrated that all three components of the project are integrally related and that if one aspect of the project is not implemented, the entire project would be abandoned. This is based primarily on funding for the City's flood control aspect of the project. The property for the flood control aspect of this project will be donated to the city by the developers and is contingent upon the commercial aspect of this development. Even if all three components of the project were not integrally related, the applicants have shown for each project component that it would not be practicable to move completely offsite and still meet the project purpose. While we acknowledge that portions of the development are related and require some impacts to the Cadillac Lake wetlands, we determined that an analysis should be conducted to evaluate the opportunity to relocate portions of the development while still meeting the overall project purpose. The applicants furnished additional information showing that alternative locations are not practicable for this project as discussed below.

**NewMarket:** The applicants considered moving portions of the commercial development offsite and out of jurisdictional wetlands. As noted above, complete removal of this development from the project location is not practicable because of the relationship this portion of the project has with the overall project. An analysis submitted shows that the critical mass of the proposed development greatly enhances the developable aspects of this property. The critical mass of a location generally means that existing developments and tenants will draw additional desirable tenants. Desirable tenants are generally (1) well established, financially sound, and growing; (2) can be reasonably expected to enter into and honor leases that contain relatively higher rents; and (3) will enter into leases with longer initial terms and will likely renew those leases for multiple terms. The applicant has adequately shown that for this portion of the development to be successful it is necessary to maintain continuity between this development and the existing NewMarket Square buildings. The applicant has adequately documented and justified that unanchored shopping centers located away from the NewMarket Square buildings are not economically viable as a portion of this project based on expected lease rates of similar commercial developments in the general vicinity. The NewMarket Square rates are on average \$23.00 per square foot while other rental rates in northwest Wichita are in the \$9.00 to \$20.00 per square foot range

with fewer centers in the higher end of that range. The applicants adequately showed that relocating portions of the development is too costly and provided the least environmentally damaging practicable alternative discussed below in section 5.2.4.

**East Side:** The same concept of critical mass was described by the applicants and is also applicable to this development. In addition, the proposed Lowe's retail store requires sufficient developable land for the large box store and associated parking. Based on the critical mass and required large footprint of the Lowe's retail store, we determined that it is impracticable to relocate any portion of the East Side development.

**City's Flood Control:** The City's flood control project is contingent upon the two developers donating lands to the City for the flood control project. The results of the PEC study show that development of the flood control aspect of this project would not be successful in a location other than the proposed site. An analysis was conducted in the PEC study to determine if detention further away from the Cadillac Lake wetlands was feasible and results show that the primary detention is only functional when constructed in the Cadillac Lake wetlands vicinity. The City of Wichita originally proposed to use the entire donated East Side property for detention as discussed in the onsite City's Flood Control Alternative 1 below. This alternative would have achieved all of the regional detention necessary in the basin for all future development. The City minimized the original regional detention concept and effectively moved a portion of future detention offsite for new developments upstream in the watershed. The final proposed detention basins are sited completely in uplands. Based on the information provided, we determined that locating all of the detention offsite is not practicable.

- 5.3. Onsite Avoidance and Minimization Alternatives (preferred alternative): Reasonable onsite avoidance and minimization alternatives were evaluated to determine their practicability. The preferred alternative for the overall project includes avoidance and minimization onsite and reduces total proposed wetland impacts from 18.5 acres to 12.38 acres of impacts. The original project proposed in the public notice (impacts to 18.5 acres of wetlands) would meet the basic and overall project purpose proposed by the applicants; however, this alternative would not meet the Section 404(b)(1) guidelines as the project would not be the least environmentally damaging alternative. Below is a discussion of onsite avoidance and minimization for each of the applicants' portion of the overall project.

**NewMarket:** The original development plan for the NewMarket portion of the development completely filled the entire 12.8 acres of wetlands within the project footprint. A March 2008 supplement to the alternatives analysis was submitted to the Corps that clearly demonstrated the practicability of reasonable alternatives considered onsite. This analysis took into consideration the expected land valuation when originally purchasing the property that was based on a jurisdictional determination completed by the Corps that determined the wetlands onsite were determined to be isolated and not regulated. Since purchasing the property, new information has shown that the basin is not isolated. Based on this, the Corps asserted jurisdiction over the

wetlands in 2006.

The applicants considered a range of alternatives including construction of multi-story buildings. We concur with the applicants assessment that multi-story buildings are not reasonable for these developments based on a letter sent on 1 April 2008. Below is a discussion of reasonable alternatives considered for onsite avoidance and minimization at the NewMarket site.

- **NewMarket Alternative 1:** This alternative was originally applied for by the applicants in their application submittal. This alternative developed the entire site and filled the entire 12.8 acres of wetlands onsite and shows no avoidance and minimization onsite. This alternative is not the preferred alternative.
- **NewMarket Alternative 2:** This alternative was evaluated by the applicants and submitted to the Corps for review in October 2007. The alternative reduces impacts onsite through avoidance of approximately 1.25 acres of wetlands associated with the western detention basin onsite and by avoiding an additional 0.75 acres of wetlands adjacent to the Super Target parking lot. This alternative results in a total maximum building coverage of approximately 113,000 square feet which is a reduction of 6,370 square feet from the original project proposal. This alternative reduces environmental impacts from the original proposal and is practicable according to the applicant. The applicant had not demonstrated that this alternative was the least environmentally damaging practicable alternative and we asked the applicant to provide justification. The March 2008, supplement to the alternatives analysis submitted by the applicant documents that this alternative is not the least environmentally damaging practicable alternative. This alternative is not the preferred alternative.
- **NewMarket Alternative 3:** This alternative was evaluated by the applicants and submitted to the Corps for review in March 2008. This alternative reduces impacts onsite through avoidance of approximately 6.24 acres of wetlands on the NewMarket portion of the property. This alternative results in a building coverage of 73,100 square feet which is a reduction of 46,900 square feet from the original project proposal. This alternative is preferable from an environmental perspective; however, the applicant has adequately documented that this alternative is not practicable because it falls below the threshold of an economically viable real estate development in light of the risk and uncertainty involved. This alternative is not the preferred alternative.
- **NewMarket Alternative 4:** This alternative was evaluated by the applicants and submitted to the Corps for review in March 2008. The alternative reduces impacts onsite through avoidance of approximately 5.24 acres of wetlands on the NewMarket portion of the property. This alternative results in a building coverage of 88,707 square feet which is a reduction of 31,293

square feet from the original project proposal. The applicant stated that this is the minimum threshold of potential developable area under which the project's economic viability is sufficient to support continued financial participation in the overall project and the Corps believes that this statement is accurate. This alternative represents the preferred alternative for the NewMarket portion of the development.

**East Side:** Two onsite alternatives were considered by the applicants to develop the East Side parcel. The impacts associated with these alternatives are discussed below.

- **East Side Alternative 1:** The East Side portion of the project originally avoided proposed impacts to 5.4 acres of the 28.5 acres of wetlands located on the parcel and sited the development in a location that is primarily non-wetland areas. A total of 23.1 acres of wetlands were originally proposed to be avoided on this parcel.
- **East Side Alternative 2:** Through reconfiguring the development the applicants were able to avoid an additional 1.0 acre of wetlands resulting in the filling of 4.4 acres of the 28.5 acres of wetlands located on the parcel. The applicant adequately documented the development requirements of the Lowes retail center, five out-lots, and separate in-line commercial retail spaces including all adjacent parking to demonstrate that the proposed onsite avoidance represents the preferred alternative for the East Side portion of the development.

**City's Flood Control:** Two onsite alternatives were considered by the applicants to accomplish the Flood Control aspect of the project. The impacts associated with these alternatives are discussed below.

- **City's Flood Control Alternative 1:** The first alternative the applicant proposed in a pre-application meeting with the Corps was for a regional stormwater detention basin located on a majority of the 54 acres of the East Side parcel directly east of the proposed 26 acre East Side commercial development and north of the Chadsworth residential development. The proposed stormwater detention basin was originally designed to receive all of the stormwater from the Cadillac Lake watershed. This proposed detention basin design would have originally impacted 22.90 acres of emergent wetland by excavating out the entire wetland down approximately 5 feet and constructing a wetland park in the proposed detention basin. This alternative would achieve the applicant's goals; however, it is not the environmentally preferred alternative.
- **City's Flood Control Alternative 2:** This alternative revised the stormwater detention design and de-centralizing the original regional stormwater detention basin concept by increasing the depth of the detention basin from 5

feet to a maximum of 15 feet and shifting some of the stormwater detention capacity over to the proposed detention basins on the NewMarket property. This alternative also shifted some future detention requirements offsite for new developments in the watershed. By making these modifications, the footprint of the original stormwater detention basin located on the 54 acre parcel was substantially reduced to avoid all of the wetlands with the exception of 0.30 acre for the proposed public parking lot. This alternative represents the preferred alternative for the City's portion of the project.

**6. Impact Evaluation:** The potential environmental consequences, both individually and cumulatively, of the authorized project on the human environment, are discussed below. Alternatives considered in this evaluation are identified in Section 5 above. The final determination of this evaluation is discussed in Section 8.1.

### 6.1. Results

6.1.1. Affected Environment: The affected environment is located within two parcels of land that consist of portions of the Cadillac Lake wetlands. The Cadillac Lake wetlands are a unique wetland complex in Kansas and that is a large playa-type basin wetland, believed to have formed by subsidence or sink hole formation, and has an approximately 2,300 acre watershed. Originally, the basin was closed with no natural outlet. However, in recent times, a small drainage ditch approximately 1/2 mile long was excavated southward and connected Cadillac Lake to the west fork of Rolling Hills Creek. The Cadillac Lake wetlands are unique wetlands found in an urban setting. Many of the wetland plant species found during the wetland delineation are annuals and opportunistic species. The wetland vegetation is generally successional and possess functions that vary based on seasonal changes in climactic precipitation that influence local hydrology. The wetlands have been documented to provide food sources for a variety of bird species, habitat for amphibian and reptilian species, as well as flood storage and water filtration in a location where historical wetland losses have been well documented. The Cadillac Lake wetlands extend beyond the project boundary.

6.1.2. Special Aquatic Sites: The wetlands within the proposed project site are special aquatic sites as described in the Section 404(b)(1) Guidelines. The Cadillac Lake wetlands are unique in both the large size and location. There is record of uses by migratory birds, for breeding and foraging habitat, and use by mammals, amphibians, reptiles, and invertebrates, which together provide a valuable ecological function within the watershed. The project will result in the loss of approximately 12.38 acres of wetlands resulting in potential major long-term adverse impacts to the wetlands; however, when considering compensatory mitigation, we believe the project related impacts to result in minor long-term adverse impacts. The compensatory mitigation plan will permanently protect the remaining Cadillac Lake wetlands onsite while creating 17.5 acres of wetlands and enhancing 29.04 acres of wetlands. The mitigation will also re-establish 20

acres of wetlands within the watershed. This mitigation plan includes additional wetland acreage above and beyond what the Corps required of the applicants. The reason we believe minor long term impacts may occur is due to the inherent uncertainties in compensatory wetland mitigation. We determined that overall net impacts to wetlands, when considering mitigation, results in minimal impacts.

- 6.1.3. Water Quality: The designated uses for the Middle Arkansas–Slate Basin, in which this project falls, are aquatic life support, primary contact recreation, domestic water supply, food procurement, ground water recharge, industrial water supply, irrigation use, and livestock watering. Cowskin Creek and the Arkansas River are listed on the 303(d) list. Cowskin Creek is impaired for total suspended solids and has biological impairments. Yearly monitoring of this creek by the KDHE has noted an increase in the amounts of total phosphorous. The Arkansas River is impaired for chloride, lead, copper, sulfate and chlordane. Aside from natural salt deposits, the use of salt on streets, sidewalks, driveways, and parking lots in winter can add chloride to streams. The proposed project will involve the construction of parking lots and buildings with impervious surface. Runoff from the impervious surfaces has the ability to transport chemicals to further impair Cowskin Creek and Arkansas River as well as to the onsite compensatory mitigation. The project will mitigate these potential negative impacts to water quality by including water quality BMPs that include rubber roofs to be installed on all buildings, a Vortex stormwater system to be used at the EastSide development, grass-covered water ways, non-chloride deicers to be use on the parking lots, street sweepers for the parking lots, and stormwater detention basins. With the inclusion of these BMPs we conclude that the project will result in long-term minor impacts to water quality. Construction activities would likely have a short term adverse impact by a potential increase in sediment runoff from the exposed construction site.
- 6.1.4. Fish and Wildlife: The decrease of habitat and disturbance to wildlife from increased vehicle traffic, noise, debris, etc. will likely impact the existing wildlife that utilize the area. Many species would continue to use the undisturbed and mitigation areas though some would likely abandon the area as it is likely that less habitat units would be available to support current wildlife onsite. The proposed development would fragment and reduce habitat that likely has a high use by migratory birds, amphibians, reptiles, and other terrestrial animals. The proposed compensatory mitigation would minimize direct and indirect impacts to wildlife by creating and enhancing important wetland habitat onsite. The proposed development would result in a minor long-term adverse impact to wildlife.
- 6.1.5. Flood Hazards and Floodplain Values: The proposed project site is located in the floodplain (FEMA Zone A). Since the project is located in a FEMA floodplain the project must comply with the State and local floodplain requirements that ensure adverse flooding impacts will not occur to adjacent properties. The project is designed to alleviate flooding concerns downstream. Engineering drainage studies show that the proposed project would decrease flooding potential

downstream. The engineered solution will modify the natural existing floodplain values. The proposed project will result in a long-term benefit to downstream flooding.

- 6.1.6. Endangered Species: The proposed activity is located within the range of the State and Federally listed as threatened, piping plover (*Charadrius melodus*), and the State and Federally listed as endangered least tern, (*Sterna antillarum*). There is documented foraging use of the project site by these species. Based on completed consultation with the FWS this project is not likely to adversely affect ESA species.
- 6.1.7. Cultural Resources and Historic Properties: The State Historical Preservation Officer determined the project as proposed should have no effect on properties listed on the National Register of Historic Places or otherwise identified in their files. No adverse impact will occur.
- 6.1.8. Cumulative and Secondary Impacts: The project has a potential for significant cumulative and secondary impacts to flooding, wetlands including wildlife habitat, and water quality; however, the mitigation should offset these potentially significant impacts. We anticipate only minor cumulative and secondary impacts when considering compensatory mitigation for this project.

Past impacts to the Cadillac Lake wetlands have been ongoing and the wetlands have been manipulated to varying degrees over the past 30 years. The wetlands were approximately 350 acres and have been reduced to approximately 170 acres due to past agricultural practices and urban sprawl. In the late 1970's and early 1980's Cadillac Lake wetlands were drained through a network of farm ditches on the Pearson and NewMarket properties and the construction of a pond on the Pracht property in part to increase agricultural production on the properties. In the late 1980's early 1990's residential communities located directly south and east of the Pearson property were developed on a portion of the original Cadillac Lake basin. Between 2000 to 2006 commercial retail development was constructed across Maize Road directly west of the Pearson property and south of the NewMarket property, which was located in or near the original Cadillac Lake basin. Historically, the basin was closed with no natural outlet. However, in recent times, a small drainage ditch approximately 1/2 mile long was excavated southward and connected Cadillac Lake to the west fork of Rolling Hills Creek.

The watershed of the Cadillac Lake wetlands is generally dominated by agricultural, residential, and commercial runoff. The wetlands are susceptible to general water quality concerns associated with runoff from agricultural and urban activities. This project should not result in significant cumulative water quality impacts based on the BMPs discussed in Section 6.1.3 of this document.

Development pressure has accelerated in the general vicinity of the Cadillac Lake wetlands we anticipate that agricultural setting will continue to change to more of

an urban setting. In April, 2005, the City of Wichita produced a 2030 Functional Land Use Guide for the Wichita and the surrounding smaller cities. Based on the review of this guide, Wichita and the City of Maize expect urban growth, including local commercial, in the watershed of the Cadillac Lake wetlands. This project will likely induce minor additional development pressures in the near vicinity though it is difficult to quantify and based on the local land use guide it is unlikely that this project will induce significant additional cumulative pressures on the Cadillac Lake wetlands since the local municipalities appear to be directing city expansion to this location. It is important to note that many of the development activities impacting the Cadillac Lake wetlands may proceed without a DA permit.

It is foreseeable that the adjacent Bannon property will likely be developed into additional commercial property. This property likely includes portions of the Cadillac Lake wetlands. When this property is developed a DA permit may be required if the applicant proposes to place fill in jurisdictional wetlands. At this time an approved jurisdictional determination has not been requested or completed on the property. Project plans for this property have not been provided to the Corps at this time and do not know if a DA permit will be required. If a permit is required we would process the application according to all applicable laws and regulations.

The PEC study shows that the flood control portions of this project will detain runoff from current and future developments in the watershed. In consideration of current and future projects according to hydrologic analysis in the PEC study, this project does not create significant cumulative or secondary impacts to flooding.

This permit should not result in significant cumulative and secondary impacts due to the establishment of BMPs and compensatory wetland mitigation. Preservation and enhancement of the onsite mitigation ensures that the majority of the remaining Cadillac Lake wetlands will be protected in perpetuity. This project should result in long-term minor negative cumulative and secondary impacts.

- 6.1.9. Consideration of Property Ownership: The project is designed in consideration of the flooding concerns for adjacent properties including the Chadsworth residential and other immediately adjacent properties. The project should benefit the property owners that are susceptible to flooding. The entire project is located on private property and should have only minor environmental impacts on other property owners in the area.
- 6.1.10. Energy Conservation and Development: The project will have no effect on energy conservation and development.
- 6.1.11. Environmental Benefits: The proposed compensatory mitigation includes construction of a parking lot to facilitate public education and recreation within the remaining wetlands. This would result in a minor long term benefit to the

environment and is based on anticipated increase in public education in the importance of wetlands.

- 6.1.12. Economics: The project will generate tax revenue for the city and state through sales tax and income tax revenue. Construction related activities will generate temporary jobs until the development is complete. Operation of the commercial businesses will generate local retail jobs. This project will have a long term benefit to the economics of the area.
- 6.1.13. Navigation: This project will have no effect on navigation.
- 6.1.14. Marine Sanctuaries: This project will have no effect on marine sanctuaries.
- 6.1.15. Traffic and Transportation Patterns: The proposed commercial development will increase traffic due to the level of increase commercial opportunities and should be addressed according to the City of Wichita's traffic development plan. This project will have a minor long term impact on traffic and transportation patterns.
- 6.1.16. Noise: The proposed project will have a temporary minor adverse impact on noise from construction, and a minor long term adverse noise impact from traffic and encroaching business development on site.
- 6.1.17. Safety: The proposed project is designed for storm water control and commercial development which proposes to enhance safety through flood control. This project should result in a long term benefit to safety.
- 6.1.18. Land Use: This project will change the land use from agricultural to urban use. This project will have no adverse effect on land use.
- 6.1.19. Food and Fiber Production: This project will have no adverse effect on food and fiber production.
- 6.1.20. Mineral Needs: A plugged and capped oil well has been determined to exist within the project footprint. The capped oil well suggests that all oil that is economically feasible to extract has been removed. This project will have no adverse effect on mineral needs.
- 6.1.21. Other Factors: No other important factors affecting the human environment have been identified.

7. **Section 404(b)(1) Evaluation**: The subject activity has been evaluated in accordance with guidelines developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army, and published at 40 CFR 230. The following discussion addresses adverse impacts, individually and cumulatively, for all evaluation factors identified in Subparts C through H of subject regulation. Alternatives considered in this evaluation are identified in Section 5 above. The findings of this evaluation are

discussed in section 8.2 below.

#### 7.1. Physical and Chemical Characteristics (Subpart C):

- 7.1.1. Substrate Impacts: The fill activities in wetlands would potentially result in substantive substrate impacts associated with the filling of 12.24 acres of onsite wetlands. The substrate associated with the 12.24 acres of wetlands will be lost to this project. In consideration of compensatory mitigation we determined that substrate will be re-created both onsite and offsite that includes creation of 17.5 acres of wetland onsite, enhancement of 29.04 wetland acres onsite, and re-establishment of 20 wetland acres offsite. We determined that overall net impacts to substrate when considering mitigation results in minimal impacts.
- 7.1.2. Suspended Particulates and Turbidity: This project should result in minimal impacts associated with suspended particulates and turbidity primarily related to construction activities. Once the project is constructed we anticipate less turbidity generated from this parcel due to a land use change from agriculture to commercial. Agricultural uses typically result in higher turbidity through normal farming practices.
- 7.1.3. Water: This project will result in minimal impacts to water associated with the filling of 12.24 acres of onsite wetlands. The fill material will be clean fill and we do not anticipate a major change in water chemistry, clarity, color, odor, or taste associated with this discharge.
- 7.1.4. Current Patterns and Water Circulation: This project will result in minimal impacts associated with current patterns and water circulation. The filling of 12.24 acres of onsite wetlands will alter current patterns though the current patters and water circulation. The topography onsite is generally flat and there are generally are not current patterns within the wetland.
- 7.1.5. Normal Water Fluctuations: This project will result in minimal impacts associated with normal water fluctuations. We anticipate that any negative impacts associated with normal water fluctuations will be offset with the proposed mitigation.
- 7.1.6. Salinity Gradients: Salinity Gradients analysis is not applicable to this project as the project is not located near an ocean.

#### 7.2. Biological Characteristics (Subpart D):

- 7.2.1. Threatened and Endangered Species: There is documented foraging use of the project site by the state and federally listed as threatened, piping plover (*Charadrius melodus*), and the state and federally listed as endangered least tern, (*Sterna antillarum*). Consultation was completed with the FWS and the project is not likely to adversely affect either of the avian species. For this reason this

project will result in minimal impacts to threatened and endangered species.

7.2.2. Fish and Other Aquatic Organisms: There would be a potential for substantive adverse impacts to fish and other aquatic organisms resulting from the 12.24 acres of wetland fill associated with this project. In consideration of compensatory mitigation we determined that the creation of 17.5 acres of wetland onsite, enhancement of 29.04 wetland acres onsite, and re-establishment of 20 wetland acres offsite minimizes impacts to fish and other aquatic organisms. We determined that overall net impacts to fish and other aquatic organisms, when considering mitigation, results in minimal impacts.

7.2.3. Other Wildlife: There would be a potential for substantive adverse impacts to other wildlife resulting from the 12.24 acres of wetland fill associated with this project. In consideration of compensatory mitigation we determined that the creation of 17.5 acres of wetland onsite, enhancement of 29.04 wetland acres onsite, and re-establishment of 20 wetland acres offsite minimizes impacts to other wildlife. We determined that overall net impacts to other wildlife, when considering mitigation, results in minimal impacts.

### 7.3. Special Aquatic Sites (Subpart E):

7.3.1. Sanctuaries and Refuges: Not applicable.

7.3.2. Wetlands: There would be a potential for substantive adverse impacts to wetlands resulting from the 12.24 acres of wetland fill associated with this project. In consideration of compensatory mitigation we determined that the creation of 17.5 acres of wetland onsite, enhancement of 29.04 wetland acres onsite, and re-establishment of 20 wetland acres offsite minimizes impacts to other wildlife. We determined that overall net impacts to wetlands, when considering mitigation, results in minimal impacts.

7.3.3. Mud Flats: Not applicable. No mud flats have been identified onsite.

7.3.4. Vegetated Shallows: Not applicable. No vegetated shallows have been identified onsite.

7.3.5. Coral Reefs: Not applicable. No vegetated shallows have been identified onsite.

7.3.6. Riffle and Pool Complexes: Not applicable. No vegetated shallows have been identified onsite.

### 7.4. Human Use Characteristics (Subpart F):

7.4.1. Municipal and Private Water Supplies: This project should have no effect on municipal and private water supplies.

7.4.2. Recreational and Commercial Fisheries: This project should have no effect on municipal and recreational and commercial fisheries.

7.4.3. Water-Related Recreation: The wetlands have been used for bird and animal watching. The proposed project includes public access to the remaining wetlands which would enhance access and promote future bird and animal watching. There would be a potential for substantive adverse impacts to water-related recreation resulting from the 12.24 acres of wetland fill associated with this project. In consideration of compensatory mitigation we determined that the creation of 17.5 acres of wetland onsite, enhancement of 29.04 wetland acres onsite, and re-establishment of 20 wetland acres offsite minimizes impacts to water-related recreation. We determined that overall net impacts to water-related recreation, when considering mitigation, results in minimal impacts.

7.4.4. Aesthetics: There would be a potential for substantive adverse impacts to aesthetics resulting from the 12.24 acres of wetland fill associated with this project. In consideration of compensatory mitigation we determined that the creation of 17.5 acres of wetland onsite, enhancement of 29.04 wetland acres onsite, and re-establishment of 20 wetland acres offsite minimizes impacts to aesthetics. We determined that overall net impacts to aesthetics, when considering mitigation, results in minimal impacts.

7.4.5. Parks, National and Historic Monuments, National Seashores, Wild and Scenic Rivers, Wilderness Areas, Research Sites and Similar Preserves: This project should have no effect on municipal and private water supplies.

#### 7.5. Contaminant Evaluation and Testing (Subpart G):

7.5.1. Evaluation of Dredged or Fill Material: Clean fill will be brought to the site for proposed commercial development. There is no reason to suspect it will be carrier of contaminants.

7.5.2. Chemical, Biological and Physical Evaluation: Clean fill will be brought to the site for proposed commercial development. There is no reason to suspect it will be carrier of contaminants. We determined that the effects on the water column and on the benthos are not necessary to study because the likelihood of contamination associated with the fill is acceptably low.

#### 7.6. Actions to Minimize Adverse Effects (Subpart H):

7.6.1. Actions Concerning the Location of the Discharge: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.

7.6.2. Actions Concerning the Material to be Discharged: All appropriate and practicable steps have been taken to insure minimal adverse effects of the

proposed discharge.

- 7.6.3. Actions Controlling the Material After Discharge: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.
- 7.6.4. Actions Affecting the Method of Dispersion: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.
- 7.6.5. Actions Related to Technology: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.
- 7.6.6. Actions Affecting Plant and Animal Populations: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.
- 7.6.7. Actions Affecting Human Use: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.
- 7.6.8. Other Actions: All appropriate and practicable steps have been taken to insure minimal adverse effects of the proposed discharge.

## 8. Mitigation

- 8.1. Applicant Proposal: The applicants originally proposed to mitigate all impacts onsite through wetland creation and enhancement of existing onsite wetlands. The proposal would have created 17.5 wetland acres and enhanced 29.04 wetland acres. Through the public interest review and in coordination with the Corps, the applicants modified their proposal to include an additional 20 acres of offsite wetland re-establishment at the Cowskin Creek site.
- 8.2. Mitigation Rationale: The reason the proposed mitigation is necessary is to offset direct and indirect impacts associated with the project's impacts on the Cadillac Lake wetlands.
- 8.3. Mitigation Function: The mitigation wetland habitats created, re-established, and enhanced will provide multiple functions that include flood water storage, water quality improvements, increased species diversity, wildlife habitat and recreational values. The created emergent wetlands will function as additional flood storage reserve during periods of high rainfall and help improve water quality within the watershed. Once the native wetland vegetation has been established at the mitigation sites, it will be used by a diversity of wildlife including song birds, mammals, reptiles and amphibians. The maintenance of the mitigation sites includes control of invasive species and is of primary

importance for the diversity of wildlife within the wetlands.

- 8.4. Mitigation Acceptance: Through coordination with the public and resources agencies we determined that the original proposed mitigation was inadequate and did not adequately offset temporal wetland impacts. The applicant revised their mitigation proposal to include an additional 20 acres of wetland re-enhancement within the watershed. We determined that the creation of 17.5 acres of wetland, the enhancement of 29.04 acres of wetland, and the re-establishment of 20 acres offsite at the Cowskin Creek site adequately offset direct and indirect wetland impacts associated with the project. Special condition "c" has been included in this permit in order to ensure success of the mitigated wetlands.

## 9. Special Conditions

- 9.1. Mandatory by Regulation/Policy: The following special conditions, with any exceptions noted after the condition, will be included in all individual DA permit authorizations as required by national policy guidance and/or regulations.

- a. You must sign and return a "Compliance Certification" after you complete the authorized work and any required mitigation. Your signature will certify that you completed the work in accordance with this permit, including general and specific conditions, and that any required mitigation was completed in accordance with the permit conditions.
- b. This permit does not authorize you to take the Federally listed interior least tern (*Sterna antillarum*) and/or piping plover (*Charadrius melodus*). If any impacts to the surface water impoundments on the site occur between May 15 through July 31, a survey for the least tern and piping plovers must be completed prior to beginning the work. If water level fluctuations expose open shoreline, a survey for nesting activity must be conducted prior to beginning work. All required surveys must be submitted to this office and you must receive approval to commence work prior to construction in a surface water impoundment onsite. You must immediately cease work and contact this office if either of the avian species are found during a survey. If work associated with this project will not take place in surface water impoundments between May 15 and July 31, no additional surveys will be required.

- 9.2. Project Specific:

- c. You are responsible to mitigate for wetland losses according to the March 2008 "The Cadillac Lake Drainage Improvement District's Proposed Cadillac Lake and Cowskin Creek Wetland Mitigation Plan" including the amendment to page 7-1 of the document submitted in an email on April 16, 2008. In

addition to the proposed plan, the following conditions apply:

- The Cadillac Lake and Cowskin Creek mitigation sites must have an approvable deed restriction (with land transfer) or conservation easement placed on the property prior to beginning work in waters of the U.S. Work may not begin in waters of the U.S. until you have received written verification from the U.S. Army Corps of Engineers that the deed restriction (with land transfer) or conservation easement is acceptable.
- Your responsibility to complete the required compensatory mitigation will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the U.S. Army Corps of Engineers.

This condition is necessary to offset impacts to the Cadillac Lake wetlands and to ensure a reasonable amount of assurance that the mitigation will be successful.

- d. If any part of the authorized work is performed by a contractor, before starting work you must discuss the terms and conditions of this permit with the contractor; and, you must give a copy of this entire permit to the contractor.

This condition is necessary to insure compliance with the terms and conditions of the subject permit. Past experience has shown that full compliance with the permit is more likely when all parties conducting the authorized work are familiar with the permit.

- e. You must use clean, uncontaminated materials for fill in order to minimize excessive turbidity by leaching of fines, as well as to preclude the entrance of deleterious and/or toxic materials into the waters of the United States by natural runoff or by leaching.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- f. You must dispose of excess concrete and wash water from concrete trucks and other concrete mixing equipment in a nonwetland area above the ordinary high water mark and at a location where the concrete and wash water cannot enter the water body or an adjacent wetland area.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- g.** You must excavate and fill in the wetlands in a manner that will minimize increases in suspended solids and turbidity which may degrade water quality and damage aquatic life outside the immediate area of operation.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- h.** You must immediately remove and properly dispose of all debris during every phase of the project in order to prevent the accumulation of unsightly, deleterious and/or toxic materials in or near the water body.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality, public safety and aesthetics are minimized.

- i.** You must not dispose of any construction debris or waste materials in a wetland area, or at any location where the materials could be introduced into the water body or an adjacent wetland as a result of runoff, flooding, wind, or other natural forces.

This condition is a practicable measure that is necessary to ensure that impacts to aquatic habitats are confined to the authorized area.

- j.** You must store all construction materials, equipment, and/or petroleum products, when not in use, above anticipated high water levels.

This condition is a practicable measure that is necessary to ensure that adverse impacts of authorized fill on water quality are minimized.

- k.** You must restrict the clearing of timber and other vegetation to the absolute minimum required to accomplish the work. Clearing, grading and replanting should be planned and timed so that only the smallest area necessary is in a disturbed, unstable or unvegetated condition.

This condition is necessary to ensure that only the minimum amount of vegetation is removed.

## **11. Determinations.**

- 10.1. Findings of No Significant Impact: After evaluating the anticipated economic, social, and environmental effects of the proposed activity including compensatory mitigation, it is my determination that the granting of a Department of the Army permit will not have a significant adverse effect on the quality of the human environment; therefore, the filing of an environmental impact statement is not

required.

- 10.2. Section 404(b)(1) Guidelines Compliance: As required by Section 404(b)(1) of the Clean Water Act (33 USC 1344), the subject activity has been evaluated in accordance with guidelines developed by the Administrator of the Environmental Protection Agency in conjunction with the Secretary of the Army, and published at 40 CFR 230. The 404(b)(1) evaluation has resulted in a conclusion that use of the discharge site is not prohibited by 40 CFR 230. There are no less environmentally damaging practicable alternatives. The activity does not appear to (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of CWA; (2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; (3) violate requirements of any Federally designated marine sanctuary. The activity will not cause or contribute to significant degradation of waters of the United States including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values; or (4) appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem.
- 10.3. Clean Air Act Conformity: Section 176(c) of the Clean Air Act. The project has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activity proposed under this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this project.
- 10.4. Public Interest Review: I find that issuance of a Department of the Army permit to the City of Wichita, NewMarket V, LLC, and East Side Investments, LLC as prescribed by regulations published in 33 CFR 320-331, is based on a thorough analysis and evaluation of the various factors enumerated above; that there are no less damaging reasonable alternatives available to the applicant that will achieve the purposes for which the work is being constructed; that the work is in accordance with the overall desires of the public as reflected in the comments of state and local agencies and the general public; that the work is deemed to comply with established state and local laws, regulations, and codes; that there have been no identified, significant, adverse environmental effects related to the work; that the issuance of this permit is consonant with national policy, statutes, and administrative directives; and that on balance the total public interest should best be served by the issuance of a Department of the Army

## 11. Signatures/Approvals.

Prepared by: Joshua Marx

Title: Regulatory Project Manager

Reviewed by: Mark Frazier

Title: Chief, Regulatory Branch

66 Encls (see attached list)

18 April 08

Date



BY: ROGER A. WILSON, JR.  
Colonel, EN  
Commanding

## 12. Attachments/Enclosures Index.

- 12.1 Public Notice
- 12.2. Environmental Protection Agency letter (EPA), 27 February 2007
- 12.3. EPA letter, 28 June 2007
- 12.4 EPA letter, 14 November 2007
- 12.5. U.S. Fish and Wildlife Service (FWS) letter, 23 February 2007
- 12.6. FWS letter, 28 June 2007
- 12.7. FWS letter, 30 October 2007
- 12.8. Representative Todd Tiahrt letter, 8 August 2007
- 12.9. Kansas Department of Wildlife and Parks (KDWP) letter, 21 February 2007
- 12.10. KDWP letter, 28 June 2007
- 12.11. KDWP letter, 15 October 2007
- 12.12. Kansas Department of Agriculture, Division of Water Resources letter, 2 March 2007
- 12.13. Kansas State Historic Preservation Office letter, 16 May 2007
- 12.14. Carl Brewer, Mayor, City of Wichita letter, 26 June 2007
- 12.15. Jeff Longwell, City Council Office, City of Wichita letter, 6 August 2007
- 12.16. Sedgwick County Conservation District letter, 28 June 2007
- 12.17. Chadsworth Home Owners Association letter, 14 February 2007
- 12.18. Bradford Home Owners Association letter, 21 February 2007
- 12.19. Steven G. Sorensen, Kansas Wildlife Federation email, 25 February 2007
- 12.20. Ellie Skokan, Southwind Group, Kansas Chapter, Sierra Club email, 10 March 2007
- 12.21. Sierra Club letter, 16 March 2007
- 12.22. Sierra Club letter, 26 June 2007
- 12.23. Sierra Club letter, 18 October 2007
- 12.24. Jeff Bannon Auction and Realty, Inc. letter, 23 February 2007
- 12.25. Jeff Bannon Auction and Realty, Inc. letter, 2 June 2007
- 12.26. Flatland Investments, LLC letter, 26 June 2007
- 12.27. R. Patrick Ayars, Key Construction Inc. email, 29 June 2007
- 12.28. Ray Henderson letter, 7 February 2007
- 12.29. Ray Henderson email, 21 March 2007
- 12.30. William R. Pracht letter, 12 February 2007
- 12.31. Kathleen Henderson letter, 13 February 2007
- 12.32. Angie Bayliff email, 21 March 2007
- 12.33. Cam Woody email, 21 March 2007
- 12.34. Joyce Hart email, 20 June 2007
- 12.35. Darrel Hart email, 25 June 2007
- 12.36. Nick F. Martin letter, 26 June 2007
- 12.37. James Skolaut letter, 26 June 2007
- 12.38. Colonel David T. Dennis, USAF (Ret.) letter, 26 June 2007
- 12.39. Larry E. Bottenberg letter, 26 June 2007
- 12.40. Richard E. Brown email, 28 June 2007
- 12.41. Earl Callison email, 28 June 2007
- 12.42. Doug Hye email, 28 June 2007

- 12.43. Joe Kramer letter, 28 June 2007
- 12.44. Steven G. Sorensen email, 29 June 2007
- 12.45. Corps letter to applicants, 2 March 2007
- 12.46. Applicants response letter, 29 March 2007
- 12.47. Corps letter to applicants, 3 July 2007
- 12.48. Applicants response letter, 19 July 2007
- 12.49. Corps letter to applicants, 21 August 2007
- 12.50. Final Proposed Wetland Mitigation Plan, September 2007
- 12.51. George R. Kolb, City Manager, City of Wichita letter, 17 September 2007
- 12.52. Corps letter to applicants, 22 February 2008
- 12.53. Supplement to the Alternative Analysis for Proposed Drainage Improvement District, March 2008
- 12.54. Economic Analysis for Supplement to Alternative Analysis for Proposed Drainage Improvement District, March 2008
- 12.55. The Cadillac Lake Drainage Improvement District's Proposed Cadillac Lake and Cowskin Creek Wetland Mitigation Plan, March 2008
- 12.56. Arnall Golden Gregory LLP letter, 18 February 2008
- 12.57. Arnall Golden Gregory LLP letter, 7 March 2008
- 12.58. Matt Jeppson email, 11 March 2008
- 12.59. Foulston Siefkin LLP letter, 1 April 2008
- 12.60. Public Notice for Public Meeting, 10 May 2007
- 12.61. Public Meeting transcript, 19 June 2007
- 12.62. Endangered species survey submitted by applicants to FWS, 07 August 2007
- 12.63. FWS response to applicants regarding endangered species survey, 20 August 2007
- 12.64. Corps email on ESA consultation to FWS, 18 March 2008
- 12.65. FWS email consultation concurrence, 1 April 2008
- 12.66. Kansas Department of Health and Environment Water Quality Certification, 4 April 2008