

# **ENVIRONMENTAL ASSESSMENT**

Watertown Shooting Range  
Watertown, South Dakota

Prepared by:  
U.S. Fish and Wildlife Service  
South Dakota Department of Game, Fish and Parks  
and  
City of Watertown, South Dakota

December, 2016

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## **CHAPTER 1: PROJECT SUMMARY, PURPOSE AND NEED**

### ***1.1 PROJECT SUMMARY***

State: South Dakota (Map 1)

County: Codington County (Map 2)

Location: City of Watertown (Map 3)

Legal: Lots 1 and 2 of the Wess Addition to the City of Watertown, South Dakota. NE ¼ Section 8 & NW ¼ Section 9 – Township 116 North – Range 52 West (Map 4)

Coordinates: North 44.8748794°, West -97.088263

The City of Watertown, South Dakota and the South Dakota Department of Game, Fish & Parks (GFP) proposes to construct a shooting range on property owned by the City and located within the corporate boundaries of the municipality. The proposed site is south of the intersection of 20<sup>th</sup> Avenue SE and 17<sup>th</sup> Street SE. Willow Creek and the Big Sioux River surround the west, south and east sides of the property.

Proposed improvements to be made at the site include an indoor shooting facility, an outdoor shooting range consisting of a pistol range, rifle range, trap shooting range, parking lot, sidewalks, outdoor vault toilet and other necessary appurtenances needed to complete the proposed project (Map 5).

Improvements will be developed in two phases. Phase I, scheduled for construction in 2017, will consist of the outdoor pistol, rifle and trap shooting improvements, parking lot, sidewalks, outdoor vault toilet and other necessary appurtenances needed to complete the proposed project. Phase II, scheduled for construction in 2018, will consist of the indoor shooting facility.

Outdoor shooting ranges will consist of two 25 yard pistol bays, one 100 yard rifle range divided into two 50 yard lanes and eight 100 yard lanes, one 100 yard rifle range divided into ten 100 yard lanes and one 200 yard rifle range divided into five 200 yard lanes. A parking lot, sidewalks, outdoor vault toilet and other necessary appurtenances needed to complete the proposed project are also included in outdoor range development plans.

The indoor shooting facility will be located southwest of the intersection of 20<sup>th</sup> Avenue SE and 17<sup>th</sup> Street SE while the outdoor shooting ranges will be located to the south and west of the indoor shooting range and constructed in a north to south orientation with shooters stationed on the north side of the range and targets on the south side of the range.

Trap shooting will be stationed west of the outdoor shooting range with shooting directed to the southwest. Perimeter poles will be utilized to delineate edges of the trap shooting area to maintain a safe direction of fire.

All outdoor pistol and rifle bays will be constructed with side berms at a minimum height of eight feet and end berms at a minimum height of twenty feet. Dirt berms will be used with material coming from within the boundaries of the project site.

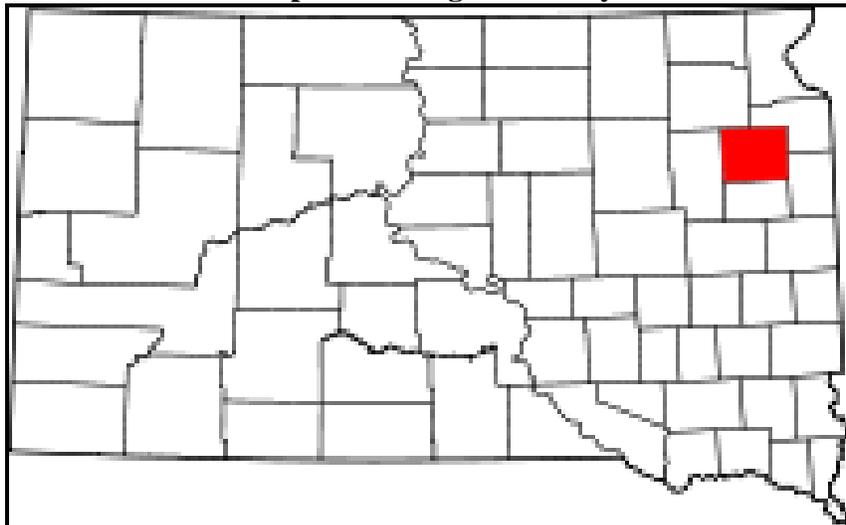
Lead management guidelines in the EPA Best Management Practices for Lead at Outdoor Shooting Ranges manual (Revised June 2005) will be implemented at this site.

Estimated project cost for Phase I is approximately \$1,082,000 while Phase II will cost approximately \$1,500,000. Funding sources for this proposed project are the City of Watertown and Pittman-Robertson Federal Aid in Wildlife Restoration Act funds administered through the U.S. Fish and Wildlife Service (USFWS). Phase I, the outdoor range, will utilize both funding sources while Phase II, the indoor range, will be funded entirely by the City of Watertown.

**Map 1 – State of South Dakota**



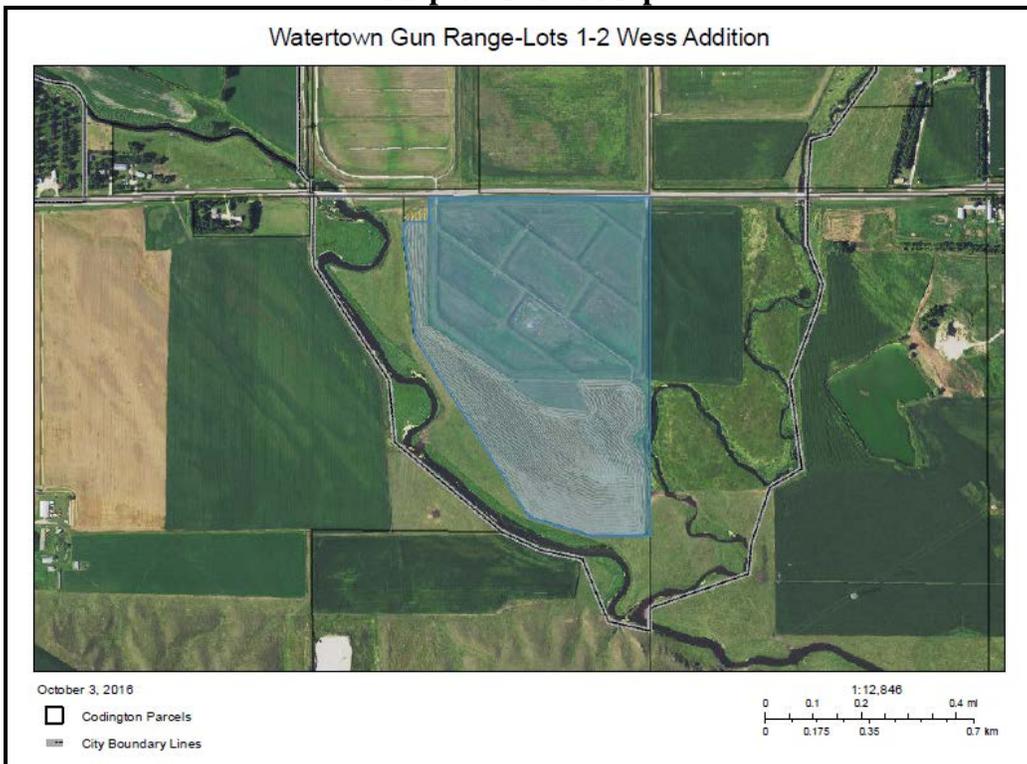
**Map 2 – Codrington County**



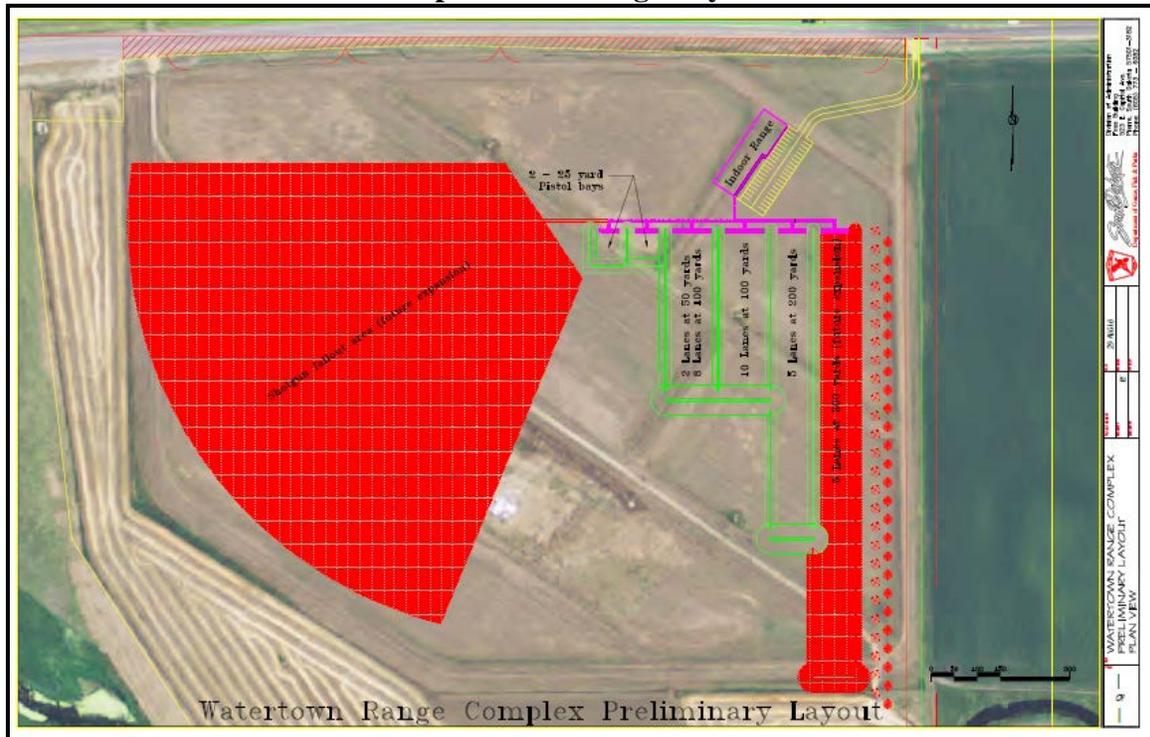
**Map 3 – Watertown Gun Range Location**



**Map 4 – Parcel Map**



## Map 5 – Gun Range Layout



### 1.2 PURPOSE

The purpose of this range is to provide a safe setting for shooting rifles, handguns and shotguns. Expected results and benefits will be to provide safe and accessible indoor and outdoor shooting facilities to the public as well as area law enforcement agencies. Users of the range will include local law enforcement, recreational shooters, hunters and other individuals or groups interested in shooting.

### 1.3 NEED

An estimated population of 22,073 in 2015 makes the City of Watertown the fifth largest community in the State of South Dakota. A high concentration of shooting enthusiasts exists in this community while access to safe places to shoot in the area is limited.

Area shooters, local law enforcement, members of the public and the City of Watertown have all expressed support for this proposed facility as a safe, controlled, patrolled and accessible site for a variety of shooting disciplines. No publicly owned and operated indoor and outdoor shooting range currently exists in the area.

Currently, there are no shooting facilities in the Watertown area that include indoor and outdoor ranges to accommodate pistol, rifle and shotgun shooting activities. Existing shooting ranges are either private or offer shooting opportunities limited to short range rifle/pistol shooting or target shooting with shotguns.

Shooting activity currently takes place on private land, scattered public sites or undeveloped state areas because no public multi-purpose shooting range has been established in the Watertown area. This range will provide a safe, confined and controlled location for shooting activities.

#### ***1.4 BACKGROUND***

Property to be developed at the preferred site for this project was acquired from Howard E. Wess and Irene Wess, husband and wife, by the City of Watertown in 1983. The Wess family used the property for agricultural purposes and did not make any substantial improvements or alterations to the property.

Two years later a major construction project on the site was completed by the City of Watertown. In 1985, 30 acres of rapid infiltration basins of Infiltration/Percolation (I/P) cells were constructed to discharge plant effluent. This project involved surface and subsurface disturbance and altered the usage of the property from agricultural to wastewater treatment.

Routine discharges of wastewater plant effluent to I/P cells occurred for over a decade. Routine discharge was discontinued the fall of 1997 and only temporary discharges have occurred since. The final temporary discharge occurred in April of 2001. No wastewater activities have taken place at the site since that date.

In 2013 an Indoor Gun Range was added to the City of Watertown's Long Term Capital Improvement Plan for budget year 2016. Further discussions in 2014 and 2015 identified the need for an outdoor shooting range to serve shooters in the Watertown area. A gun range task force consisting of elected officials, city employees, South Dakota Game, Fish, and Parks (SD GF&P), law enforcement, shooters and other interested parties was formed in January of 2016 with the intent of developing a new indoor and outdoor shooting range to serve the City of Watertown.

Following months of meetings a draft plan for property improvements (Map 5) was adopted by the gun range task force in September of 2016.

#### ***1.5 FUNDING***

Gun range construction consists of two phases with an estimated cost of \$2,582,000. Estimated project cost for Phase I, the outdoor range, is approximately \$1,082,000 while Phase II, the indoor range, will cost approximately \$1,500,000. Funding sources for this proposed project are the City of Watertown and Pittman-Robertson Federal Aid in Wildlife Restoration Act funds administered through the U.S. Fish and Wildlife Service (USFWS). Phase I, the outdoor range, will utilize both funding sources while Phase II, the indoor range, will be funded entirely by the City of Watertown.

## 1.6 OPERATION & MAINTENANCE

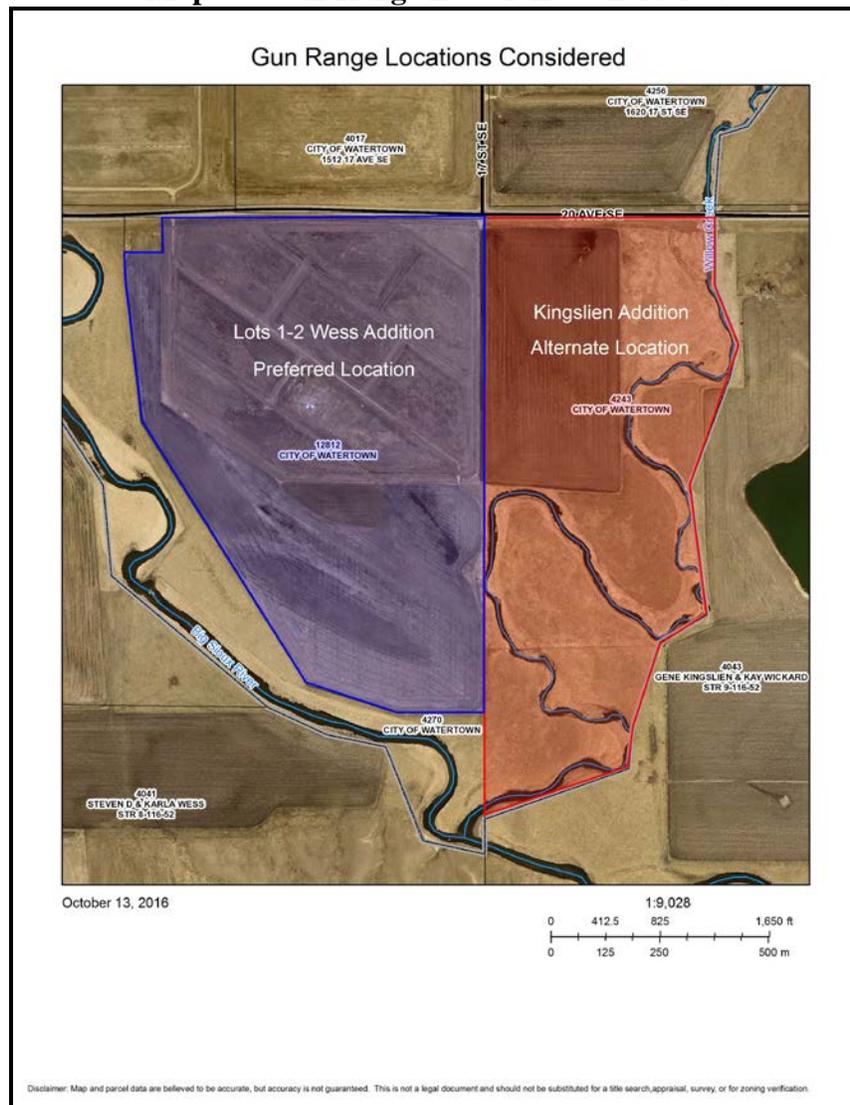
Operation and Maintenance of the gun range property will be the responsibility of the City of Watertown with assistance from other public and private parties interested in the long term viability of the project.

## 1.7 DECISIONS THAT NEED TO BE MADE

The City of Watertown, SD GF&P and USFWS will select one of the alternatives reviewed in this environmental assessment and the USFWS's Regional Director will determine if this environmental assessment is adequate to support a finding of no significant impact decision or if an environmental impact statement will be required.

## CHAPTER 2: ALTERNATIVES

**Map 6 – Gun Range Locations Considered**



## ***2.1 ALTERNATIVE A – PREFERRED LOCATION***

Development of a shooting range will occur on a site that is approximately 94 acres consisting of Lots 1 and 2 of the Wess Addition in the City of Watertown that is owned by the City of Watertown. Proposed improvements to be made at the site include an indoor shooting facility, an outdoor shooting range consisting of a pistol range, rifle range, trap shooting range, parking lot, sidewalks, outdoor vault toilet and other necessary appurtenances needed to complete the proposed project (Map 7).

Improvements will be developed in two phases. Phase I, scheduled for construction in 2017, will consist of the outdoor pistol, rifle and trap shooting improvements, parking lot, sidewalks, outdoor vault toilet and other necessary appurtenances needed to complete the proposed project. Phase II, scheduled for construction in 2018, will consist of the indoor shooting facility.

Outdoor shooting ranges will consist of two 25 yard pistol bays, one 100 yard rifle range divided into two 50 yard lanes and eight 100 yard lanes, one 100 yard rifle range divided into ten 100 yard lanes and one 200 yard rifle range divided into five 200 yard lanes. A parking lot, sidewalks, outdoor vault toilet and other necessary appurtenances needed to complete the proposed project are also included in outdoor range development plans.

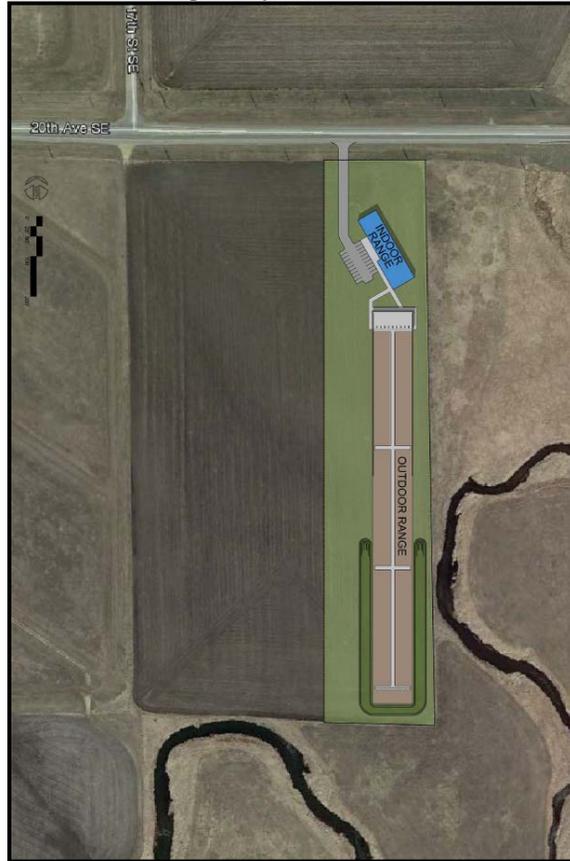
The indoor shooting facility will be located southwest of the intersection of 20<sup>th</sup> Avenue SE and 17<sup>th</sup> Street SE while the outdoor shooting ranges will be located to the south and west of the indoor shooting range and constructed in a north to south orientation with shooters stationed on the north side of the range and targets on the south side of the range.

Trap shooting will be stationed west of the outdoor shooting range with shooting directed to the southwest. Perimeter poles will be utilized to delineate edges of the trap shooting area to maintain a safe direction of fire.

All outdoor pistol and rifle bays will be constructed with side berms at a minimum height of eight feet and end berms at a minimum height of twenty feet. Dirt berms will be used with material coming from the I/P cells that exist within the boundaries of the project site.



## Map 8 – Gun Range Layout at Alternative Location



### ***2.3 ALTERNATIVE C - NO ACTION***

Under the no action alternative the proposed project site would continue to be used by the City of Watertown and no additional shooting facilities would be constructed in the area. Recreational shooting at scattered sites in the area will continue to be the norm and basic shooting safety issues would continue to be an issue.

## **CHAPTER 3: AFFECTED ENVIRONMENT**

### ***3.1 PHYSICAL ENVIRONMENT***

The City of Watertown is located in Codington County in northeastern South Dakota in a Tall Grass Prairie Ecosystem on the Coteau des Prairies. The preferred and alternative sites are within the corporate boundaries of the City of Watertown in the southernmost part of the community. Both sites are used for wastewater treatment purposes.

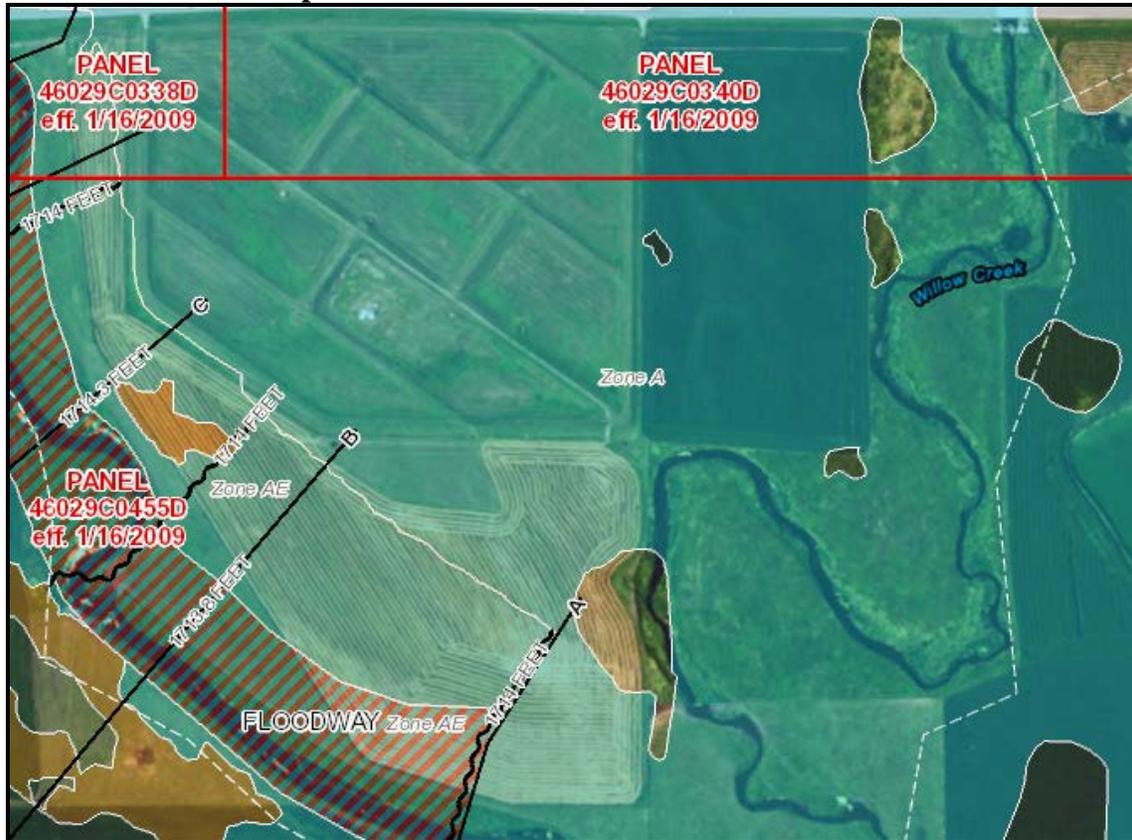
Willow Creek and the Big Sioux River surround the west, south and east sides of the property while 20<sup>th</sup> Avenue SE abuts the north side of the property. Adjacent property to the west, south and east, located between the project site and the Big Sioux River or Wolf Creek, is used for agricultural purposes while property to the north of 20<sup>th</sup> Avenue SE has been developed for recreational usage to include soccer and softball.

### 3.2 WATER

Willow Creek and the Big Sioux River surround the west, south and east sides of both properties. Both water bodies are outside of either proposed gun range construction area.

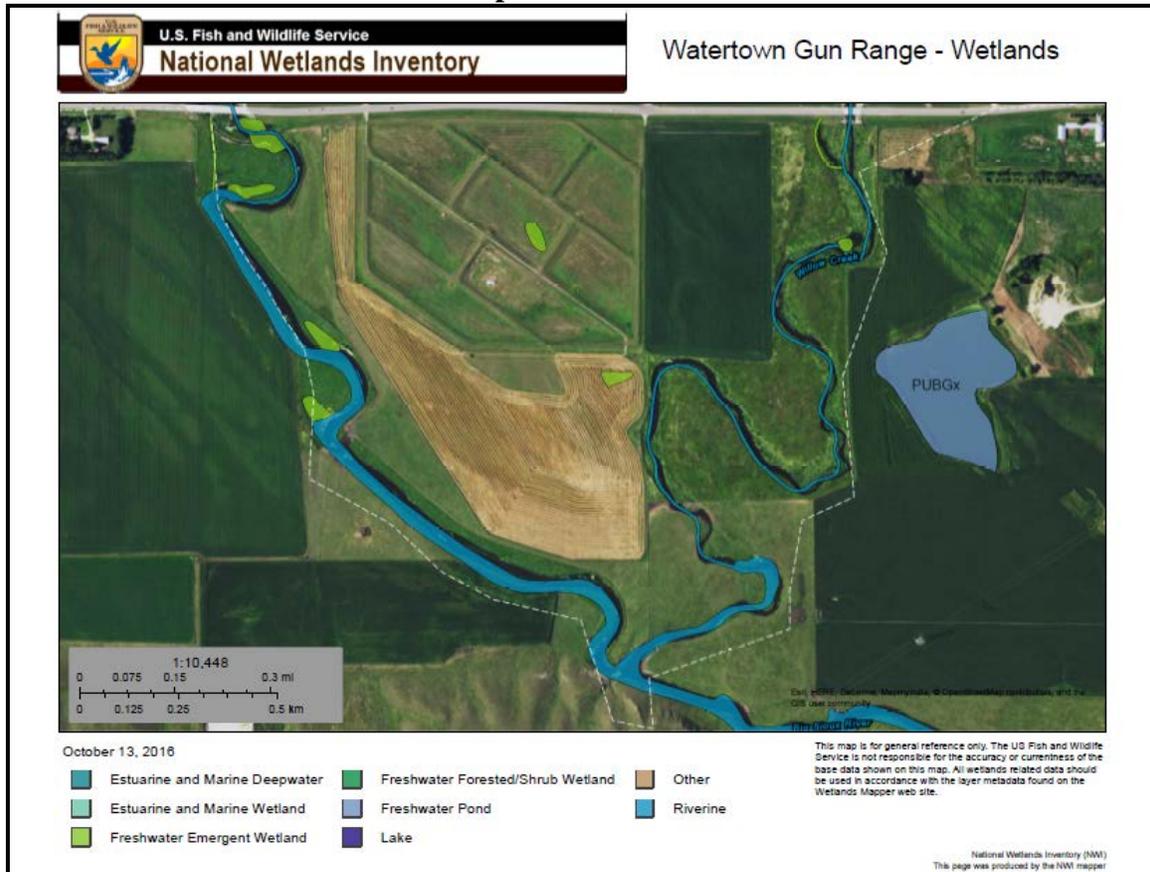
Multiple flood zones are present on the sites including: Zone A, Zone AE and the Big Sioux River Floodway. 100 year and 500 year floodplains are also present. Both locations fall entirely within a Zone A area within the 100 year floodplain (Map 9).

**Map 9 – FEMA’s National Flood Hazard Area**



Wetlands are present within the boundaries of both locations being considered for gun range development. Earth moving activities associated with gun range construction at both locations will occur outside the boundaries of any of the wetlands identified by the US Fish and Wildlife Service National Wetlands Inventory (Map 10).

## Map 10 - Wetlands



### 3.3 SOILS

Soil types present in the preferred site (Map 11) include: J166A: Rauville silty clay loam (0.1%), J146A: Lamoure-Rauville silty clay loams (0.2%), J125A: Divide loam (0.9%), J171A: Renwash loam (8.2%), J176A: Spottswood loam (8.7%), J169B: Renshaw-Sioux loams (9.4%), J160A: Moritz-Lamoure complex (21.4%) and M-W: Miscellaneous-Water (51.2%).

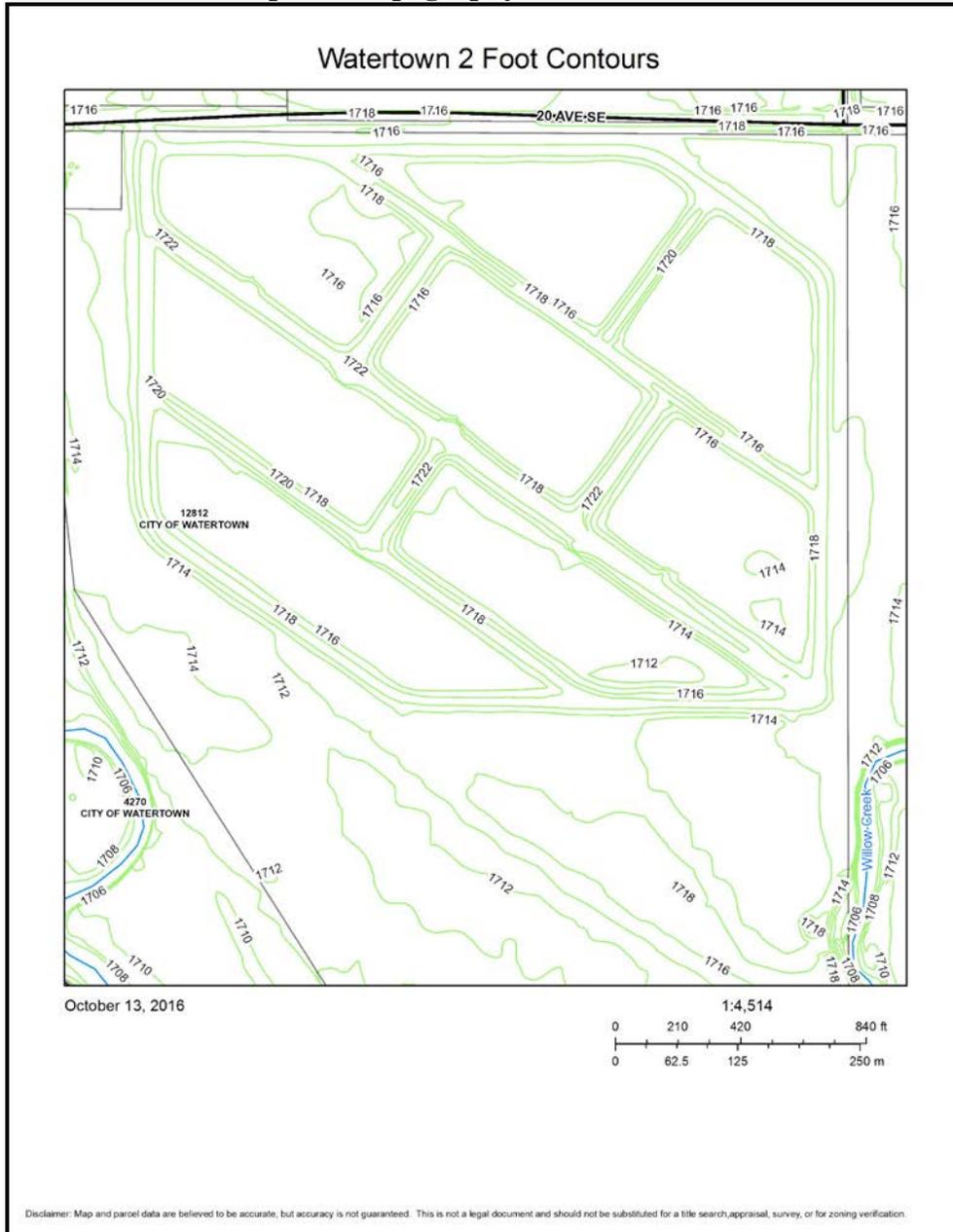
Soil types present in the alternate site (Map 11) include: J166A: Rauville silty clay loam (0.1%), J146A: Lamoure-Rauville silty clay loams (30.7%), J169B: Renshaw-Sioux loams (0.1%), J160A: Moritz-Lamoure complex (65.5%) and J132A: Fordtown Loam (3.6%).



### 3.5 TOPOGRAPHY

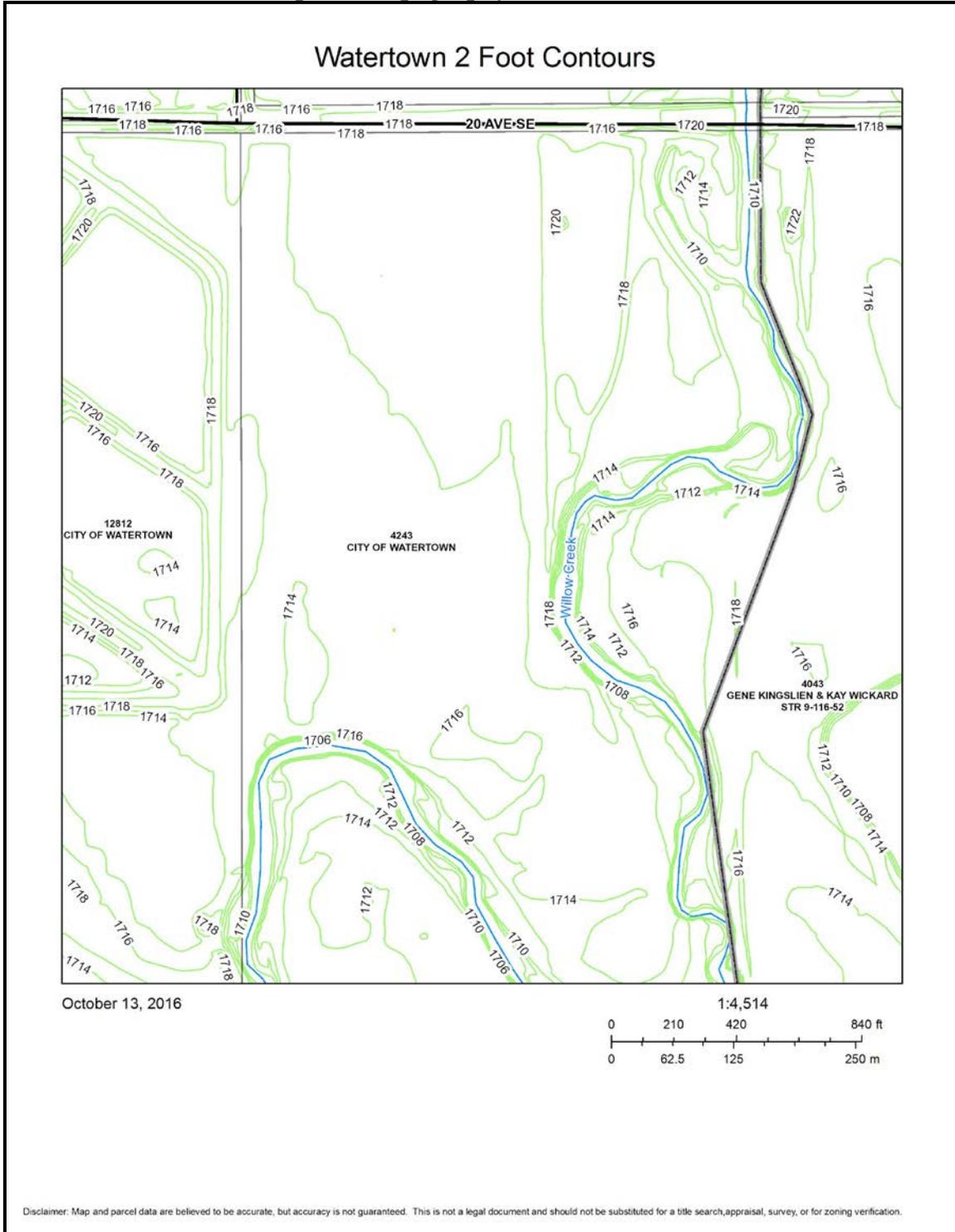
Elevation changes at the preferred site (Map 12) are minimal and the overall site is naturally flat. I/P cell walls represent the only significant topographic features within site boundaries.

**Map 12 – Topography at Preferred Site**



Elevation changes at the alternate site (Map 13) are minimal and the overall site is naturally flat. Willow Creek represents the only significant topographic features within site boundaries.

**Map 13 – Topography at Alternate Site**



### ***3.6 BIOLOGICAL RESOURCES***

Biological resources on both sites are a mixture of vegetation typical to this part of South Dakota. The area within the preferred site to be disturbed by the construction of a gun range contains a mixture of grasses that were planted after the completion of I/P cells in 1985. The area within the alternate site to be disturbed by the construction of a gun range is currently used to plant annual grain crops and no natural vegetation is present. Threatened, endangered or candidate biological resources are not known to be present.

### ***3.7 WILDLIFE***

Wildlife on both sites is typical to this part of South Dakota. Bird species sighted using the sites include: ring-necked pheasant, mourning dove, raptors, waterfowl as well as several species of migratory song birds. Common mammals found on the sites include: white-tailed deer, opossum, raccoon, skunk, badger, fox, coyote and cottontail rabbits. Reptiles utilizing the site include: garter snakes, painted turtles and snapping turtles. Threatened, endangered or candidate wildlife resources are not known to be present.

### ***3.8 FISH AND OTHER AQUATIC SPECIES***

No fish and other aquatic species are present on the preferred site. Willow Creek is within the boundaries of the alternate site and contains fish and other aquatic species including, but not limited to, bluegill, channel catfish, creek chubs, largemouth bass, northern pike, sauger, Topeka shiner, walleye, white crappie and yellow bullhead. The Topeka shiner, an endangered species, is known to occupy Willow Creek.

### ***3.9 THREATENED AND ENDANGERED SPECIES***

While no threatened and endangered species are present within the area to be disturbed by construction of the gun range at either site, the US Fish & Wildlife Service has identified Topeka Shiners as a federally listed endangered species in the project area and Willow Creek as a known occupied stream. The US Fish & Wildlife Service offered the following comments pertaining to the Topeka shiner in a letter dated April 19, 2016:

“Topeka shiners are known to occupy numerous small streams within eastern South Dakota, and are concentrated within the Big Sioux, Vermillion, and James River watersheds. Willow Creek is a known occupied stream. If any instream construction is necessary for this project, additional measures may be necessary to ensure adverse impacts to the Topeka shiner are not incurred as a result of this project. We also recommend avoidance of activities in Willow Creek and ensuring projectiles or pellets are not deposited in the stream”

### ***3.10 HISTORIC AND CULTURAL RESOURCES***

No known historic and cultural resources are present at the preferred site. Earth moving associated with the construction of I/P cells in 1985 significantly altered the surface and no historic sites were identified or uncovered during construction.

No known historic and cultural resources are present at the alternate site. The alternate site has not been significantly disturbed and an archaeological review of the site would need to be completed to ensure that no archaeological resources are present.

### ***3.11 LAND USE***

Both sites are zoned I-2 Heavy Industrial by the City of Watertown and are currently used for wastewater treatment purposes. The preferred location has been developed for I/P cells while the alternate location is used as a site for the spreading of sludge from the wastewater treatment plant.

### ***3.12 SOCIOECONOMIC CONDITIONS***

Development at either site would contribute indirectly to the local economy. Both sites are located within the corporate boundaries of the City of Watertown and development must meet all planning and zoning requirements established by the municipality. Gun range users generally benefit the local economy by purchasing fuel, food, lodging and retail goods from area businesses.

### ***3.13 NOISE***

Noise levels at both sites considered is generally low since the properties have not been developed for uses that generate increased use or traffic. 20<sup>th</sup> Avenue NE is located immediately north of both sites. Average daily traffic on 20<sup>th</sup> Avenue NE, according to traffic count maps created by the SD Department of Transportation, is 3,006 vehicles per day. The nearest railroad is approximately two miles west of the sites. The nearest airport is approximately 3.5 miles northwest of the sites. Shooting activities do not currently occur in the project area. No decibel readings have been taken at either site.

## **CHAPTER 4: ENVIRONMENTAL CONSEQUENCES**

Environmental consequences for each area examined in this section will be identified as either No Significant Impact or Mitigation Required. A determination of No Significant Impact will be made if the proposed action will not significantly impact the environment. A determination of Mitigation Required will be made if the proposed action will have an impact on the environment and recommended mitigation measures will be identified to reduce the overall impact to the environment.

## **4.1 WATER**

### Alternative A – Preferred Action – Mitigation Required

The SD Department of Environment and Natural Resources Drinking Water Quality Program reviewed the preferred location on April 27, 2016 and offered the following:

“It appears, based on the information, that the project will have little or no impact on the air quality in this area. The project is approved.”

The SD Department of Environment and Natural Resources Surface Water Quality Program reviewed the preferred location on April 19, 2016 and offered the following:

“The DENR finds that construction, using conventional construction techniques, should not cause violation of any statutes or regulations administered by the DENR based on the following recommendations:

1. At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site. Any construction activity that disturbs an area of one or more acres of land must have authorization under the General Permit for Storm Water Discharges Associated with Construction Activities.
2. A Surface Water Discharge (SWD) permit may be required if any construction dewatering should occur as a result of this project.
3. A wetland may be impacted by this project. These water bodies are considered waters of the state and are protected under the South Dakota Surface Water Quality Standards. The discharge of pollutants from any source, including indiscriminate use of fill material, may not cause destruction or impairment except where authorized under Section 404 of the Federal Water Pollution Control Act.”

The City of Watertown will conform to all recommendations made by the SD Department of Environment and Natural Resources Surface Water Quality Program when constructing the gun range at the preferred site.

The SD Department of Environment and Natural Resources Ground Water Quality Program reviewed the preferred location on October 7, 2016 and offered the following:

“The South Dakota Department of Environment and Natural Resources (Department) has reviewed the above-referenced project for potential impacts to ground water quality. Based on the information submitted in your memo dated September 30, 2016, the department does not anticipate any major adverse impacts to groundwater quality by this project. However, DENR advises the gun range is being built in/near a former municipal waste treatment area and the

proposed gun range area has the potential to have waste related contamination. Additionally, some potential impacts to soils or groundwater may be possible from accumulation of spent ammunition. DENR also requires environmental monitoring wells, in the project area, to not be destroyed during construction activities.”

The City of Watertown will conform to all recommendations made by the SD Department of Environment and Natural Resources Ground Water Quality Program when constructing the gun range at the preferred action site.

The US Fish & Wildlife Service reviewed the preferred location on April 19, 2016 and offered the following:

“According to the National Wetlands Inventory map (enclosed and available at <http://wetlands.fws.gov/>), wetlands may exist in the proposed project area. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible; then minimization of any adverse impacts; and finally, replacement of any lost acres; in that order. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted and the methods of replacement should be prepared and submitted to the resource agencies for review.”

Construction of a gun range on the preferred location will completely avoid impacts to any wetlands that may be present within the boundaries of the property. Wetlands that are in the general vicinity of the project are outside of the project footprint. All earth moving and construction activities will take place only in areas that avoid any impact to existing designated wetlands.

The project is located within the boundaries of a 100 year floodplain. In order to mitigate flood related impacts, project design and construction must meet standards established within the REVISED ORDINANCES – CITY OF WATERTOWN, SOUTH DAKOTA - TITLE 5 – BUILDING CODES AND FLOODPLAIN REGULATIONS.

Alternative B Location (Kingslien Addition) – Mitigation Required

The SD Department of Environment and Natural Resources Drinking Water Quality Program reviewed the preferred location on April 27, 2016 and offered the following:

“It appears, based on the information, that the project will have little or no impact on the air quality in this area. The project is approved.”

The Alternative B Location (Kingslien Addition) is immediately adjacent to the preferred location and impacts to drinking water quality will be identical at both sites.

The SD Department of Environment and Natural Resources Surface Water Quality Program reviewed the preferred location on April 19, 2016 and offered the following:

“The DENR finds that construction, using conventional construction techniques, should not cause violation of any statutes or regulations administered by the DENR based on the following recommendations:

1. At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site. Any construction activity that disturbs an area of one or more acres of land must have authorization under the General Permit for Storm Water Discharges Associated with Construction Activities.
2. A Surface Water Discharge (SWD) permit may be required if any construction dewatering should occur as a result of this project.
3. A wetland may be impacted by this project. These water bodies are considered waters of the state and are protected under the South Dakota Surface Water Quality Standards. The discharge of pollutants from any source, including indiscriminate use of fill material, may not cause destruction or impairment except where authorized under Section 404 of the Federal Water Pollution Control Act.”

The Alternative B Location (Kingslien Addition) is immediately adjacent to the preferred location and impacts to surface water quality will be identical at both sites.

The SD Department of Environment and Natural Resources Ground Water Quality Program reviewed the preferred location on April 21, 2016 and offered the following:

“The Ground Water Quality Program of the South Dakota Department of Environment and Natural Resources has reviewed the above-referenced project for potential impacts to ground water quality. Based on the information submitted in your memo dated April 11, 2016, the department does not anticipate any major adverse impacts to groundwater quality by this project. However, DENR advises the gun range is being built in/near a former municipal waste treatment area and the proposed gun range area has the potential to have waste related contamination. Additionally, some potential impacts to soils or groundwater may be possible from accumulation of spent ammunition.”

The Alternative B Location (Kingslien Addition) is immediately adjacent to the preferred location and impacts to ground water quality will be identical at both sites.

The US Fish & Wildlife Service reviewed the preferred location on April 19, 2016 and offered the following:

“According to the National Wetlands Inventory map (enclosed and available at <http://wetlands.fws.gov/>), wetlands may exist in the proposed project area. If a project may impact wetlands or other important fish and wildlife habitats, the U.S. Fish and Wildlife Service (Service), in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347) and other environmental laws and rules, recommends complete avoidance of these areas, if possible; then minimization of any adverse impacts; and finally, replacement of any lost acres; in that order. Alternatives should be examined and the least damaging practical alternative selected. If wetland impacts are unavoidable, a mitigation plan addressing the number and types of wetland acres to be impacted and the methods of replacement should be prepared and submitted to the resource agencies for review.”

Construction of a gun range on the Kingslien Addition will completely avoid any wetlands that may be present within the boundaries of the property.

The project is located within the boundaries of a 100 year floodplain. In order to mitigate flood related impacts project design and construction must meet standards established within the REVISED ORDINANCES – CITY OF WATERTOWN, SOUTH DAKOTA - TITLE 5 – BUILDING CODES AND FLOODPLAIN REGULATIONS.

No Action – No Significant Impact to water if no action is taken

## **4.2 SOILS**

Alternative A – Preferred Action – No Significant Impact

Soils have been significantly disturbed at the preferred site with the construction of the existing I/P cells. All of the required earthen material required to construct the gun range will come from the existing I/P cells and no off-site material will be needed to complete the project. When earth shaping activities are finished and construction is complete then topsoil will be placed in appropriate areas and seeded.

Lead management guidelines in the EPA Best Management Practices for Lead at Outdoor Shooting Ranges manual (Revised June 2005) will be implemented at this site. The following steps will be taken to manage lead at the gun range site:

- Control and contain spent rifle and pistol ammunition with earthen backstops and utilize natural vegetation to control and contain spent shot on the trap range.
- Prevent the migration of lead from reaching nearby waterways by leaving the existing perimeter berms in place to keep all lead shot contained within the footprint of the outdoor gun range.
- Remove and recycle lead shot as need by utilizing the services of a commercial lead recycler.

- Documenting lead management activities will be the responsibility of the City of Watertown

Alternative B Location (Kingslien Addition) – Soils Will Be Impacted

Soils at the Kingslien Addition site have been disturbed for the purpose of planting row crops with no substantial amount of material being taken from or added to the site. All of the required earthen material required to construct the gun range will come from the existing I/P cells located on the preferred site to complete the project. When earth shaping activities are finished and construction is complete then topsoil will be placed in appropriate areas and seeded.

Lead management guidelines in the EPA Best Management Practices for Lead at Outdoor Shooting Ranges manual (Revised June 2005) will be implemented at this site. The following steps will be taken to manage lead at the gun range site:

- Control and contain spent rifle and pistol ammunition with earthen backstops and utilize natural vegetation to control and contain spent shot on the trap range.
- Prevent the migration of lead from reaching nearby waterways by leaving the existing perimeter berms in place to keep all lead shot contained within the footprint of the outdoor gun range.
- Remove and recycle lead shot as need by utilizing the services of a commercial lead recycler.
- Documenting lead management activities will be the responsibility of the City of Watertown

No Action – No Significant Impact to soils if no action is taken

**4.3 AIR QUALITY**

Alternative A – Preferred Action – No Significant Impact

The SD Department of Environment and Natural Resources Air Quality Program reviewed the preferred location on April 14, 2016 and offered the following:

“It appears, based on the information, that the project will have little or no impact on the air quality in this area. The project is approved.”

Alternative B Location (Kingslien Addition) – No Significant Impact

The SD Department of Environment and Natural Resources Air Quality Program reviewed the preferred location on April 14, 2016 and offered the following:

“It appears, based on the information, that the project will have little or no impact on the air quality in this area. The project is approved.”

The Kingslien Addition is immediately adjacent to the preferred location and impacts to air quality will be identical at both sites.

No Action – No Significant Impact to air quality if no action is taken

#### ***4.4 TOPOGRAPHY***

Alternative A – Preferred Action – Topography Will Be Impacted

Berms from the existing on-site I/P cells will be used to construct gun range berms and the topography of the site will be changed as a result of the project. This alteration to the topography of the area will not significantly alter the character of the preferred location.

Alternative B Location (Kingslien Addition) – Topography Will Be Impacted

Berms from the existing on-site I/P cells on the preferred location will be used to construct gun range berms on the Kingslien Addition site and the topography of the site will be changed as a result of the project. This change will make a portion of the site no longer suitable for the purpose of planting row crops and prime farmland would be lost.

No Action – No Significant Impact to topography if no action is taken

#### ***4.5 BIOLOGICAL RESOURCES***

Alternative A – Preferred Action – No Significant Impact

Areas disturbed during construction of the gun range at the preferred location will be seeded to permanent vegetation suitable for mowing and lead reclamation. Vegetation, once established, will not be disturbed beyond normal operation and maintenance.

Alternative B Location (Kingslien Addition) – No Significant Impact

Areas disturbed during construction of the gun range at the Kingslien Addition will be seeded to permanent vegetation suitable for mowing and lead reclamation. Vegetation, once established, will not be disturbed beyond normal operation and maintenance.

No Action – No Significant Impact to biological resources if no action is taken

#### ***4.6 WILDLIFE***

Alternative A – Preferred Action – No Significant Impact

The SD Department of Game, Fish & Parks reviewed the preferred location on April 14, 2016 and offered the following:

“The project as described will have no impacts on fish and wildlife resources”

The SD Department of Game, Fish & Parks reviewed the preferred location on September 19, 2016 and offered the following:

“As these proposed projects will be conducted in existing developed areas and involve localized disturbances, there should be no effect on rare, threatened, endangered, or candidate species.”

Alternative B Location (Kingslien Addition) – No Significant Impact

The SD Department of Game, Fish & Parks reviewed the preferred location on April 14, 2016 and offered the following:

“The project as described will have no impacts on fish and wildlife resources”

The SD Department of Game, Fish & Parks reviewed the preferred location on September 19, 2016 and offered the following:

“As these proposed projects will be conducted in existing developed areas and involve localized disturbances, there should be no effect on rare, threatened, endangered, or candidate species.”

The Kingslien Addition is immediately adjacent to the preferred location and impacts to fish and wildlife resources will be identical at both sites.

No Action – No Significant Impact to wildlife if no action is taken

#### ***4.7 FISH AND OTHER AQUATIC SPECIES***

Alternative A – Preferred Action – No Significant Impact

No fish and other aquatic species are present within the boundaries of the preferred location and gun range construction activities will not disturb fish and aquatic species habitat. Spent rifle, pistol and shotgun lead will be confined within the footprint of the existing I/P cells and prevented from reaching nearby waterways by leaving the existing perimeter I/P cell berms in place to keep all lead shot contained within the footprint of the outdoor gun range.

Alternative B Location (Kingslien Addition) – No Significant Impact

Fish and other aquatic species may be present within a waterway, Willow Creek, located within the boundaries of the Kingslien Addition. Gun range construction activities will not disturb or impact either Willow Creek or fish and aquatic species habitat. Spent rifle and pistol lead will be prevented from reaching nearby waterways by side and rear gun range berms built during construction of the gun range.

No Action – No Significant Impact to fish and other aquatic species if no action is taken

#### **4.8 THREATENED AND ENDANGERED SPECIES**

##### **Alternative A – Preferred Action – No Significant Impact**

The US Fish & Wildlife Service reviewed the preferred location on April 19, 2016 and offered the following:

“Topeka shiners are known to occupy numerous small streams within Eastern South Dakota, and are concentrated within the Big Sioux, Vermillion and James River watersheds. Willow Creek is a known occupied stream. If any instream construction is necessary for this project, additional measures may be necessary to ensure adverse impacts to the Topeka shiner are not incurred as a result of this project. We also recommend avoidance of activities in Willow Creek and ensuring projectiles or pellets are not deposited in the stream.”

Gun range construction activities at the preferred location will not include any instream disturbances of Willow Creek and will not impact threatened and endangered species. Design and layout of the gun range will keep spent lead bullets and shot from entering any nearby waterways by incorporating earthen backstops and natural vegetation to keep spent lead within the footprint of the gun range. Existing outside perimeter berms from the I/P cells will remain in place as they exist today as an additional safeguard to prevent the migration of spent lead into nearby waterways as well.

##### **Alternative B Location (Kingslien Addition) – No Significant Impact**

The US Fish & Wildlife Service reviewed the preferred location on April 19, 2016 and offered the following:

“Topeka shiners are known to occupy numerous small streams within Eastern South Dakota, and are concentrated within the Big Sioux, Vermillion and James River watersheds. Willow Creek is a known occupied stream. If any instream construction is necessary for this project, additional measures may be necessary to ensure adverse impacts to the Topeka shiner are not incurred as a result of this project. We also recommend avoidance of activities in Willow Creek and ensuring projectiles or pellets are not deposited in the stream.”

Gun range construction activities at the preferred location will not include any instream disturbances of Willow Creek and will not impact threatened and endangered species. The Kingslien Addition is immediately adjacent to the preferred location and impacts to threatened and endangered species will be identical at both sites.

No Action – No Significant Impact to threatened and endangered species if no action is taken

#### **4.9 HISTORIC AND CULTURAL RESOURCES**

##### **Alternative A – Preferred Action – No Significant Impact**

The SD State Historic Preservation Officer reviewed the preferred location on October 3, 2016 and offered the following:

“Based upon the information provided to the South Dakota State Historic Preservation Office on 9/20/10 we concur with your agency’s determination of “No Historic Properties Affected” for this undertaking.”

##### **Alternative B Location (Kingslien Addition) – No Significant Impact Anticipated**

The State Historic Preservation Officer has not reviewed the Kingslien Addition location and will likely require an archaeological review of the site before issuing a determination. The Kingslien Addition is immediately adjacent to the preferred location and impacts to historic and cultural resources are expected to be identical at both sites.

No Action – No Significant Impact to historic and cultural resources if no action is taken

#### **4.10 LAND USE**

##### **Alternative A – Preferred Action – No Significant Impact**

Zoning at the preferred location is I-2 Heavy Industrial District. A gun range can be permitted as a conditional use within the I-2 Heavy Industrial District under section 21.3603.19 of the City of Watertown’s Zoning Ordinance.

##### **Alternative B Location (Kingslien Addition) – No Significant Impact**

Zoning at the Kingslien Addition location is I-2 Heavy Industrial District. A gun range can be permitted as a conditional use within the I-2 Heavy Industrial District under section 21.3603.19 of the City of Watertown’s Zoning Ordinance.

No Action – No Significant Impact to zoning if no action is taken

#### **4.11 SOCIOECONOMIC CONDITIONS**

##### **Alternative A – Preferred Action**

The gun range will increase usage of the area and will result in a positive impact to the local economy through increased sales of goods and services to users of the gun range. Increased sales of goods and services will also increase sales tax revenues to the City of Watertown and surrounding area businesses.

#### Alternative B Location (Kingslien Addition)

The gun range will increase usage of the area and will result in a positive impact to the local economy through increased sales of goods and services to users of the gun range. Increased sales of goods and services will also increase sales tax revenues to the City of Watertown and surrounding area businesses. Increases at the alternative location are expected to be less than the preferred location because only rifle and pistol shooting will be offered at this site.

No Action – No Significant Impact to socioeconomic conditions if no action is taken

#### **4.12 NOISE**

##### Alternative A – Preferred Action

Noise levels will temporarily increase with gun range construction while operations of the gun range will increase noise levels at the site on an ongoing basis. Increased noise levels will not pose a threat to the hearing of persons living nearby.

An existing noise baseline of 52.8 decibels at the site was calculated by using the Housing and Urban Development (Day/Night Noise Level) noise calculator at: <https://www.hudexchange.info/environmental-review/dnl-calculator/>

The nearest housing development is located approximately one-half mile to the north of the site. Decibel readings have not been conducted at this housing development. Gun range noise is expected to be muffled by baffles, berms and tree plantings. Although shots will be audible on an occasional basis noise levels are not expected to pose a disturbance to nearby residents.

##### Alternative B Location (Kingslien Addition)

Noise levels will temporarily increase with gun range construction while operations of the gun range will increase noise levels at the site on an ongoing basis. Increased noise levels will not pose a threat to the hearing of persons living nearby.

An existing noise baseline of 52.8 decibels at the site was calculated by using the Housing and Urban Development (Day/Night Noise Level) noise calculator at: <https://www.hudexchange.info/environmental-review/dnl-calculator/>

The nearest housing development is located approximately one-half mile to the north of the site. Decibel readings have not been conducted at this housing development. Gun range noise is expected to be muffled by baffles, berms and tree plantings. Although shots will be audible on an occasional basis, noise levels are not expected to pose a disturbance to nearby residents.

No Action – No Significant Impact to noise levels if no action is taken

#### **4.13 CUMULATIVE IMPACTS**

##### Alternative A – Preferred Action

Total area impacted within the preferred site consists of approximately 50 acres within the existing I/P cells. Topography and soils will be altered during construction as existing interior I/P cell berms are reclaimed and repurposed to construct berms and backstops at the pistol and rifle ranges. Drainage will not be altered significantly because the existing perimeter berms from I/P cells will remain in place. Since EPA Best Management Practices for Lead at Outdoor Shooting Ranges will be used, no negative impact is expected to result from the construction and operation of a gun range at the preferred site.

##### Alternative B Location (Kingslien Addition)

Total area impacted within the alternative site consists of approximately 23 acres of previously undeveloped property within the boundaries of the Kingslien Addition as well as 50 acres of the preferred site falling within the existing I/P cells. Topography and soils will be altered during construction as I/P cell berms are reclaimed and repurposed from the preferred site to construct berms and backstops at the pistol and rifle ranges. Drainage will be altered significantly because the alternative site has not been developed. Since EPA Best Management Practices for Lead at Outdoor Shooting Ranges will be used, no negative impact is expected to result from the construction and operation of a gun range at the alternative site.

No Action – No Significant Impact to cumulative impacts if no action is taken

### **CHAPTER 5: COORDINATION AND CONSULTATION**

First District Association of Local Governments consulted with the following state and federal agencies:

US Army Corps of Engineers  
Office of Air Quality, SD Department of Environment and Natural Resources  
Office of Waste Management, SD Department of Environment and Natural Resources  
Office of Drinking Water, SD Department of Environment and Natural Resources  
Office of Surface Water Quality, SD Department of Environment and Natural Resources  
Office of Ground Water Quality, SD Department of Environment and Natural Resources  
SD Department of Game, Fish & Parks  
US Fish & Wildlife Service  
Natural Resources Conservation Services

SD Game, Fish & Parks consulted with the South Dakota State Historic Preservation Officer.

The City of Watertown provided historic information for the land use and development of the sites considered in this environmental assessment.

## **CHAPTER 6: PUBLIC INVOLVEMENT PROCESS**

Gun range task force meetings were held in 2016 on the following dates: January 15, January 29, February 12, March 4, March 18, April 1, May 6, May 27, June 10, June 24, August 5 and September 9. Sixteen people, on average, attended each meeting.

Gun range task force meetings included representatives from city government, county government, city law enforcement, county law enforcement, SD Game, Fish & Parks, Lake Area Technical Institute, firearms retailers and other interested parties. Meetings were held at the Watertown Police Department building and were open to the public. Meeting attendees offered input and opinions about the proposed gun range. Support for the project from gun range task force attendees has been unanimous.

Articles publicizing gun range task force meetings were published in the City of Watertown's official newspaper, the Watertown Public Opinion, in 2016 on the following dates: February 11, April 4, April 18 and May 31.

The cost of the gun range was questioned in a letter to the editor of the Watertown Public Opinion from resident Ed Cline titled "Seems Like A Lot". In that letter, Mr. Cline expressed his concern as to the justification of the estimated cost of the gun range. Cost concerns will be addressed through the public bid process required by SD Codified Law for the construction of public improvements by municipalities.

Mayor Steve Thorson, Superintendent of Wastewater and Solid Waste Mike Boerger and Gun Range Task Force member Jo Vitek visited nearby property owners and individuals that would be impacted by the gun range on March 9 and March 10 of 2016. Owners of land abutting the gun range, Steve Wess and Matt Kranz, are supportive of the proposed gun range project. Occupants of the Mother of God Monastery to the west of the gun range site, the Benedictine Sisters, are also supportive of the gun range project.

Additional public comment opportunities will be offered at future Gun Range Task Force meetings, Watertown city council work sessions and city council meetings and Planning Commission conditional use hearings that will occur prior to the start of construction.

## **CHAPTER 7: PREPARERS**

Ted Haeder, First District Association of Local Governments, Economic Development Officer

Luke Muller, First District Association of Local Governments, Senior Planner

Jordon Kitts, South Dakota Department of Game, Fish and Parks, Assistant Federal Aid Coordinator

Otto Jose, US Fish and Wildlife Service, Wildlife and Sport Fish Restoration Program

## **CHAPTER 8: WORKS CITED**

EPA Best Management Practices for Lead at Outdoor Shooting Ranges manual (Revised June 2005)

City of Watertown 2015 population estimate: <http://census.gov/>

City of Watertown floodplain ordinances: REVISED ORDINANCES – CITY OF WATERTOWN, SOUTH DAKOTA – TITLE 5 – BUILDING CODES AND FLOODPLAIN REGULATIONS

City of Watertown zoning ordinances: REVISED ORDINANCES – CITY OF WATERTOWN, SOUTH DAKOTA – TITLE 21 – ZONING

Maps 1-4, 6, 10-13: <http://1stdistrictmapnet.com/>

Map 9: <http://msc.fema.gov/portal>

Map 10: <https://www.fws.gov/wetlands/data/mapper.html>

Map 8: RSArchitects – Final Report City of Watertown Indoor/Outdoor Gun Range

Maps 5, 7: SD Office of Game, Fish & Parks

## **APPENDICES**

Response letters from the following federal and state agencies identified in Chapter 5 can be found in APPENDIX 1 – RESPONSE LETTERS.

US Army Corps of Engineers

Office of Air Quality, SD Department of Environment and Natural Resources

Office of Waste Management, SD Department of Environment and Natural Resources

Office of Drinking Water, SD Department of Environment and Natural Resources

Office of Surface Water Quality, SD Department of Environment and Natural Resources

Office of Ground Water Quality, SD Department of Environment and Natural Resources

SD Department of Game, Fish & Parks

US Fish & Wildlife Service

US Department of Agriculture Natural Resources Conservation Services

SD State Historic Preservation Office

# **APPENDIX 1 – RESPONSE LETTERS**