



US Army Corps
of Engineers

Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Public Notice

Public Notice Number: 200250179

Date: July 2, 2002

Comments Due: August 1, 2002

In reply, please refer to the Public Notice Number

TO WHOM IT MAY CONCERN:

SUBJECT: Application for a Department of the Army permit under authority of Section 404 of the Clean Water Act and water quality certification under Section 401 to fill 5.78 acres of wetlands for the Shepard Lane interchange project, as shown in the attached drawings.

APPLICANT: Utah Department of Transportation
ATTN: Byron Parker, Project Director
360 North 700 West, Suite F
North Salt Lake, UT 84054

LOCATION: The proposed UDOT Shepard Lane Interchange, part of a US Highway 89 improvement project, is located within the limits of Farmington City, in Davis County, Utah (Figure 1, General Site Location, and Figure 2, Project Vicinity Map, same drawing). The project is located in Sections 12 and 13, Township 3 North, Range 1 West, Salt Lake Base & Meridian, USGS quad maps Farmington and Kaysville. Latitude 40 -59-29.4735 Longitude 111-54-12.6869, UTM Zone 12, 424000 North, 4538000 East. The project's northern terminus is Cherry Lane; the southern terminus is Burke Lane (1.7 miles, long). The project also extends approximately 450 meters on Shepard Lane, 200 meters west of US 89 and 250 meters east of US 89 (Figure 3, Shepard Lane Project Footprint).

PURPOSE: US Highway 89 is one of two vital north-south transportation links in Davis and Weber Counties. The expansion of the existing four-lane highway to a six-lane expressway is needed to correct safety problems. Historically, there have been about three fatalities per year in the US-89 corridor. The Shepard Lane interchange would be constructed with grade separation to eliminate the conflict with cross traffic. Vertical alignment, cross sections, clear zones, and roadside barrier deficiencies would be corrected to provide a safer highway.

PROJECT DESCRIPTION: UDOT proposes to expand the existing highway to a six-lane expressway with a grade-separated interchange at Shepard Lane. Access would be limited and local traffic routed via multiple new frontage roads to the major roads connecting the interchanges (Cherry Hill, Shepard Lane, and Burke Lane). Some right-in and right-out intersections would be provided to allow a better distribution of local access points. The project footprint is shown in Figure 3 and Figures 4A-B provides cross-sections of the proposed

expressway and frontage roads. The expressway will have a median width of 24 feet with a median barrier. Required right-of-way is variable, but typically 300 feet or 150 feet on each side of centerline. Estimated ROW acquisition for this project is 16.9 acres.

Detailed project information is included in the UDOT/FHWA Final Environmental Impact Statement (FEIS) that was completed in 1996 for the improvement of US-89 in Davis and Weber Counties from I-15 in Farmington to Harrison Boulevard in South Ogden [UDOT Project NO. *HDP-9124(002)]; the 2001 Environmental Re-evaluation for the Shepard Lane Interchange [UDOT Project NO. *SP-0089(51)338] and the 2002 Environmental Re-evaluation [UDOT Project NO. SP-0067(1)0].

The northern terminus of the Shepard Lane Interchange project adjoins with the completed Cherry Hill Interchange project, another portion of the US-89 improvement project (Dept. of the Army Permit No. 199850565). The northern terminus of the Legacy Parkway project (Permit No. 199650197) connects to the southern terminus of this Shepard Lane project. Although the three projects adjoin each other along the US-89 corridor, Shepard Lane Interchange is a separate, autonomous project that will be mitigated autonomously.

PROJECT ALTERNATIVES: The following is a summary of other alternatives evaluated for this portion of US-89 described in the 1996 FEIS for US-89:

“No-Action” Alternative. The No Action alternative consists of leaving the current four-lane facility as it presently exists. Traffic signals and turning lanes would be added as they are warranted and the existing pavement would be resurfaced as needed. This option would not accommodate the projected 2015 traffic volumes and would contribute to further degradation of the safety of the facility.

Freeway. This concept consists of a six-lane freeway facility with a 64 foot depressed median (including shoulders), frontage roads and interchanges at each major cross street. The required ROW width would be variable, but would be typically about 340 feet or 170 feet each side of centerline. This option would provide the safest operation and the best level of operation to handle increased traffic volumes, but would also be \$3 million more expensive than the proposed Expressway and result in greater wetlands impacts.

Signalized Expressway. This alternative would be very similar to the proposed Expressway with six lanes, but would have the major street crossings served by signalized intersections. Right-of-way required for this option would be the same typical width as the proposed Expressway, but would not require additional property for the ramps at the major cross streets. This option would be the cheapest of the three “build” alternatives. Future traffic demands would be met with additional lanes, but safety improvements would not be as great as with the Freeway and proposed Expressway alternatives. Signalized intersections with the projected traffic volumes would have a much higher accident rate than the interchanges. This alternative would have same to slightly less wetlands impacts than the proposed project.

The proposed Expressway meets the needs of the applicant, with a slight reduction in safety when compared to the Freeway alternative because the proposed Expressway includes a reduced width median with a barrier. A benefit cost evaluation performed showed that the proposed

Expressway alternative has the greatest benefit/cost ratio and was identified as the preferred alternative in the FEIS.

AREA DESCRIPTION: The project study area has evolved from being a predominately rural agricultural region to a rapidly growing residential and commercial sector of Farmington. The majority of land surrounding the highway corridor is zoned for commercial development. The area is located within the Lower Weber watershed that drains into Farmington Bay of the Great Salt Lake. The area is not considered floodplain. From the southern terminus of the project to Shepard Lane, where the majority of the land is yet undeveloped, wetlands are abundant on both sides of the highway (Figure 5 Project Wetlands). Although predominantly wet meadow, other wetland communities of the area include forested, ditch/riparian, and emergent marsh (Figure 5A-E). Wet meadow vegetation is largely composed of Baltic rush (*Juncus balticus*), Nebraska sedge (*Carex nebrascensis*), Saltgrass (*Distichlis spicata*), and Teasle (*Dipsacus sylvestris*). In forested wetlands, dominant overstory species consist of Box-elder (*Acer negundo*), Fremont cottonwood (*Populus fremontii*), Russian olive (*Elaeagnus angustifolia*), and Willow (*Salix sp.*). The understory is dominated by Common reed (*Phragmites australis*). Emergent marsh and ditch/riparian wetlands are composed of Cattail (*Typha latifolia*), Baltic rush (*Juncus balticus*), Common reed (*Phragmites australis*), Fremont cottonwood (*Populus fremontii*), and Willow (*Salix sp.*).

Area wetlands function in provision of wildlife habitat, attenuation of peak flows, removal of sediments from runoff, and detention. Wildlife found within the US-89 corridor include deer, raccoon, squirrel, skunk, waterfowl, and other birds, reptiles, amphibians, and insects. Wetlands provide sources of food, water, cover, and nesting ground. Due to urbanization, this ecosystem has become highly fragmented making it less desirable to many species of wildlife. Many of the wetlands located near the Burke Lane Interchange area were significantly disturbed by the interchange construction during the 1970's. Some sites adjacent to the interchange have had piles of dirt, rocks, and large chunks of concrete dumped throughout them. Many wetlands have been used as native pasture for cattle and horses. Wet meadows on the west side of US-89 receive the majority of their hydrological support from numerous springs, shallow groundwater, and accumulated storm water. Wet meadows on the east side of US-89 receive the majority of their hydrological support from numerous seeps, shallow groundwater, and accumulated storm water. The forested wetlands on the east side of US-89 receive water primarily from shallow groundwater, storm runoff from the roadside drainage, and temporary flooding by Shepard Creek during storm events.

Essentially all existing drainage that both passes through the site and collects area runoff funnels into Shepard Creek. Drainage structures consist of vegetated roadside ditches and pipe culverts under Shepard Lane and US-89. Some shallow ditches collect water from wetlands as they traverse wet meadows then drain into Shepard Creek. Where the creek traverses the project area it has been significantly channelized and dredged over the years, essentially isolating it from the surrounding wet meadows west of US-89. The channel is approximately six feet in depth. Shepard Creek is designated as class 3A for aquatic wildlife and class 4 for agriculture by the Department of Water Quality. Where the creek enters a 54-inch CMP to go under US-89, drainage flows from upstream are periodically great enough to cause the stream to back up and flood adjacent forested wetlands. Area drainage flows downstream Shepard Creek and enters a

Davis County detention pond (Figure 5C). Outflows from the detention pond are controlled to prevent flooding downstream.

PROJECT IMPACTS: As described, wetlands surround the project boundaries on the south end of the project. Symmetrical roadway expansion or widening only to the east or west side of US 89 would result in equal impact to wetlands. In order to reduce ROW takes and environmental impacts including those to wetlands, modifications were made to the initial design plans, which reduced total project footprint. Current impacts are shown in Figures 5A-E Project Wetland Impacts. Figures 6A-B Minimized ROW/Wetland Impacts Footprint, illustrates the areas in which right-of-way takes were reduced and the locations where wetland impacts were minimized through design modifications.

Some of the modifications made specifically to reduce wetland impacts include:

1. The property access road, west of US 89, at the southern end of the project was redesigned, resulting in 0.20 acres of reduced wet meadow impacts. The access was determined to be a low volume road and therefore the geometrics were revised to meet the traffic demands.
2. A new cross street was planned in between Shepard Lane and Burke Lane. This new cross street would necessitate the vertical elevation of US 89 and an underpass be constructed to allow for the new cross street traffic under US 89. When the cross street was removed this allowed the mainline US 89 profile to be lowered, which in turn resulted in lowering the adjacent frontage roads and ramps. This reduced the overall footprint of the design, eliminating 0.30 acres of wet meadow impacts.
3. The property access road, east of US 89, at the southern end of the project was redesigned, resulting in 0.02 acres of reduced wet meadow impacts. This access was also determined to be a low volume road and therefore the geometrics were revised to meet the traffic demands.
4. Along the west side of US 89, south of Shepard Lane, a retaining wall was added, and the frontage road and ramp geometrics were revised. This revision shifted the horizontal alignment as close to mainline US 89 as allowed by UDOT design standards, resulting in 0.69 acres of reduced wet meadow impacts.
5. Along the east side of US 89, south of Shepard Lane, a retaining wall was added to reduce impacts to the forested wetland by 1.08 acres. This wall also reduced the impacts to Knowlton Elementary School and Shepard Park, 4(f) and 6(f) properties. This retaining wall extends from the forested wetland south past the Shepard Park property. This resulted in reducing the overall impacts to Knowlton School to 0.01 acres and 0.22 acres of impact to Shepard Park. This allows the baseball field to remain intact without any reconfiguration of the field and does not impact any of the soccer fields.
6. A Bureau of Reclamation water line was initially proposed to be relocated along the west side of US-89 through wetlands. Its relocation has been redesigned to further reduce wet meadow impacts by 0.30 acres.

The effect of these changes resulted in the minimization of wetland impacts by 2.29 acres. ROW take was reduced by 6.63 acres. The total direct wetland impacts were reduced from 8.07 acres down to 5.78 acres. The types of wetlands that are anticipated to be impacted are wet meadow (4.87 acres), ditch/riparian (0.11 acres), and forested wetlands (0.80 acres).

Increase in impervious surface will increase stormwater runoff by approximately 15 cfs in Shepard Creek. Additionally, the increased pavement will result in some increase in dissolved solids, petroleum products, and other potential contaminants. Roadway drainage structures throughout the project area will be upsized and enhanced to accommodate larger volumes of runoff and improve water quality. A stream alteration permit will be obtained in order to modify the water conveyance structure for Shepard Creek across US-89. A 175-foot long and 54-inch diameter corrugated metal pipe (CMP) will be replaced with a longer and 72-inch diameter CMP. Due to design modifications resulting in a reduced project footprint, the original 1,150-foot length proposed for this culvert has been reduced to 240 feet.

MITIGATION: Approximately 5.78 acres of wetlands will be directly impacted by this project. Construction of 15 acres of impervious surface which will yield an additional 15.0 cfs of highway stormwater runoff to Shepard Creek. Additional wetlands that are adjacent or contiguous to wetlands directly impacted may be indirectly affected. Relative functions of project wetlands include provision of wildlife habitat, attenuation of peak flows, removal of sediments from runoff, and detention. Onsite minimization and mitigation of the impacts to these functions include drainage plans for roadside and median filtration swales lined with an environmental retention mat and planted with native vegetation. If roadside swales were cut deeper than existing ditches they might affect the hydrology of adjacent wetlands. Therefore, the new swales will be cut wider but not deeper than existing ditches so as to not drain adjacent wet meadows.

The increased capacity of the swales will accommodate the filtration of larger volumes of stormwater to prevent an increase in turbidity from suspended particles. The increase in paved surface will also result in an increase in dissolved solids (from deicing salt), petroleum products, and other potential contaminants. These impacts will be minimized by the use of sheet flow through vegetated roadside slopes and discharging into vegetated swales. With the exception of necessary piping near Shepard Lane, vegetated swales are proposed along the entire length of the project prior to discharging into Shepard Creek. The pipe culverts near Shepard Lane will drain into these swales. Water quality improvements made by this treatment method include the following:

Breakdown and volatilization of hydrocarbons by bacteria degradation.

- A reduction of nutrient concentrations by soil and vegetative processes.
- Filtering of suspended solids from runoff.
- Increased settling of solids due to low velocities.
- Complexing of metals by soil adsorption and biological assimilation.

The improved drainage system will be similar to the existing system in that all drainage will flow into the Davis County detention pond via Shepard Creek. The creek's flow capacity will be increased at US-89 by replacing the existing 54-inch CMP with a 72-inch diameter CMP. The existing 6-foot channel and larger culvert will be ample in capacity to handle the estimated 100-year storm flows of 250 cfs. Outflows from the detention pond will be controlled and regulated

to prevent an increase to peak flows downstream. The detention pond will further decrease pollutant concentration and improve water quality through sedimentation and biological degradation.

Best management practices (BMPs) will be used to minimize project impacts to water resources, soil stability, and vegetation. These BMPs include the following:

- UDOT BMPs approved by the Division of Water Quality will be used which include temporary erosion and sediment controls and require environmental controls supervision.
- Utah Pollutant Discharge Elimination System (UPDES) permit will be obtained from the Division of Water Quality for which a UDOT Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented.
- Areas that contain noxious and invasive plant species will be monitored in accordance with Federal, State, and County requirements. Weed free seed will be used for revegetation. UDOT BMP Specification Section 01574 will be used as equipment will be cleaned and inspected to prevent the spread of noxious weeds.
- The stream alteration permit for Shepard Creek will set forth additional BMPs and include mitigation consisting of a revegetation plan and wildlife habitat enhancement.
- Dust emissions from the construction will be mitigated with watering of haulroads, as outlined in UDOT Specifications, Section 204 and Subsections 104.6 and 104.13.
- Environmental oversight monitoring will take place during construction to insure that all BMPs are correctly implemented.

One conceptual option to mitigate forested wetland impacts consists of the creation of forested wetlands on approximately 2.5 acres just north of the US-89/Burke Lane/I-15 interchange (currently UDOT ROW; Figure 7A). Another proposed option is to mitigate forested wetland impacts “offsite” by coordinating with the Division of Wildlife Resources to plant trees along selected watercourses within Farmington Bay Waterfowl Management Area (FBWMA).

The purchase and improvement of 43.6 acres of private land adjacent to FBWMA has been proposed to mitigate impacts to the non-forested wetlands. This property is located approximately 2 miles southwest of the project and shares the same watershed (Lower Weber). The site lies within the Davis County Conservation Zone. Figure 7B depicts the location of this proposed site, its adjacent properties, and illustrates how the majority of these adjacent lands are managed by FBWMA. Figure 7C shows that approximately two-thirds of the proposed site has been delineated, wherein are 28 acres of delineated wetlands. Wetlands are extensively wet meadow and saline playa. The remaining one-third of not previously delineated property appears to contain approximately 9 acres of wetlands and 6 acres of uplands. Wet meadow wetlands are predominated by Alkali bulrush, Baltic rush, and Salt grass. Saline playas consist of unvegetated mudflats fringed with Pickleweed. Both wet meadow and playa communities extend south into adjacent FBWMA property. The site also contains limited emergent marsh made up largely of hardstem bulrush and cattails.

After acquisition of the 43.6 acres of private property, UDOT will deed the land to FBWMA where it would be managed to benefit wildlife, consistent to management of adjacent lands. The addition of this site to FBWMA would preserve relatively large and unfragmented wetland

communities that are highly beneficial to wildlife. Several measures have been suggested to make improvements to the site including the following:

- Remove fences adjoining FBWMA
- Fence external boundary, not contiguous with FBWMA
- Control public access
- Eradicate noxious weeds and Tamarisk
- Eliminate grazing
- Remove trash
- Seasonally flood approximately 15-20 acres by diverting water flowing in Davis Creek through FBWMA property

ADDITIONAL INFORMATION:

Cultural Resources: The latest published version of the National Register of Historic Places and its monthly supplements have been reviewed and there are no places either listed or recommended as eligible which would be affected.

Threatened and Endangered Species: A 2001 Environmental Re-evaluation of the Shepard Lane Interchange included a letter from the United States Fish and Wildlife Service that confirmed agreement with a finding of "No Effect" for the proposed project.

Water Quality Certification: Certification that the proposed work, if permitted, will not violate applicable water quality standards have been requested from the Utah Division of Water Quality. The Utah Division of Water Quality intends to issue certification, provided that the proposed work will not violate applicable water quality standards. Projects are usually certified where the project may create diffuse sources (nonpoint sources) of wastes which will occur only during the actual construction activity and where best management practices will be employed to minimize pollution effects. Written comments on water quality certification should be submitted to Mr. William O. Moellmer, Utah Division of Water Quality, 288 North 1460 West, PO Box 144870, Salt Lake City, Utah 84114-4870, on or before **August 1, 2002**.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties. All interested parties are invited to submit written comments on or before **August 1, 2002**. Personal information in comment letters is subject to release to the public through the Freedom of Information Act. Any person may request, in writing, within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. The permit decision will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof;

among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership, and in general, the needs and welfare of the people. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act.

If additional information is required, please contact Ms. Sylvia Hartley of the Utah Department of Transportation at 801-951-1026, ext. 333, or Ms. Nancy Kang of the Utah Regulatory Office, telephone 801-295-8380, ext. 14, or email Nancy.Kang@usace.army.mil. Written comments should reference Public Notice Number 200250179 and should be mailed to the District Engineer-Sacramento, U.S. Army Corps of Engineers, ATTN: Ms. Nancy Kang, Utah Regulatory Office, 533 West 2600 South, Suite 150, Bountiful, Utah 84010.

Michael J. Conrad, Jr.
Colonel, Corps of Engineers
District Engineer

Attachments: 15 Drawings