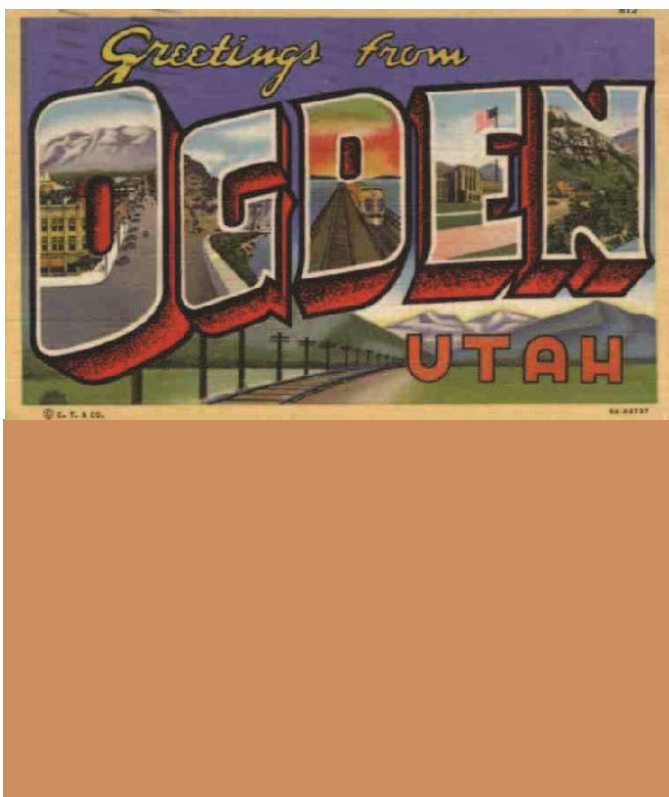


APPENDIX B10

Water Quality Technical Report



Water Quality Technical Report

Ogden/Weber State University Transit Project

Ogden, Weber County, Utah

October 10, 2018



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1.0 Introduction

This technical report describes the waters in the water quality evaluation area for the Ogden/Weber State University Transit Project and evaluates how these waters would be affected by the Action Alternative. The Action Alternative is the Bus Rapid Transit on 25th Street Alternative, which was selected by the Ogden/Weber State University Transit Project partners and adopted by the Ogden City Council as the Locally Preferred Alternative.

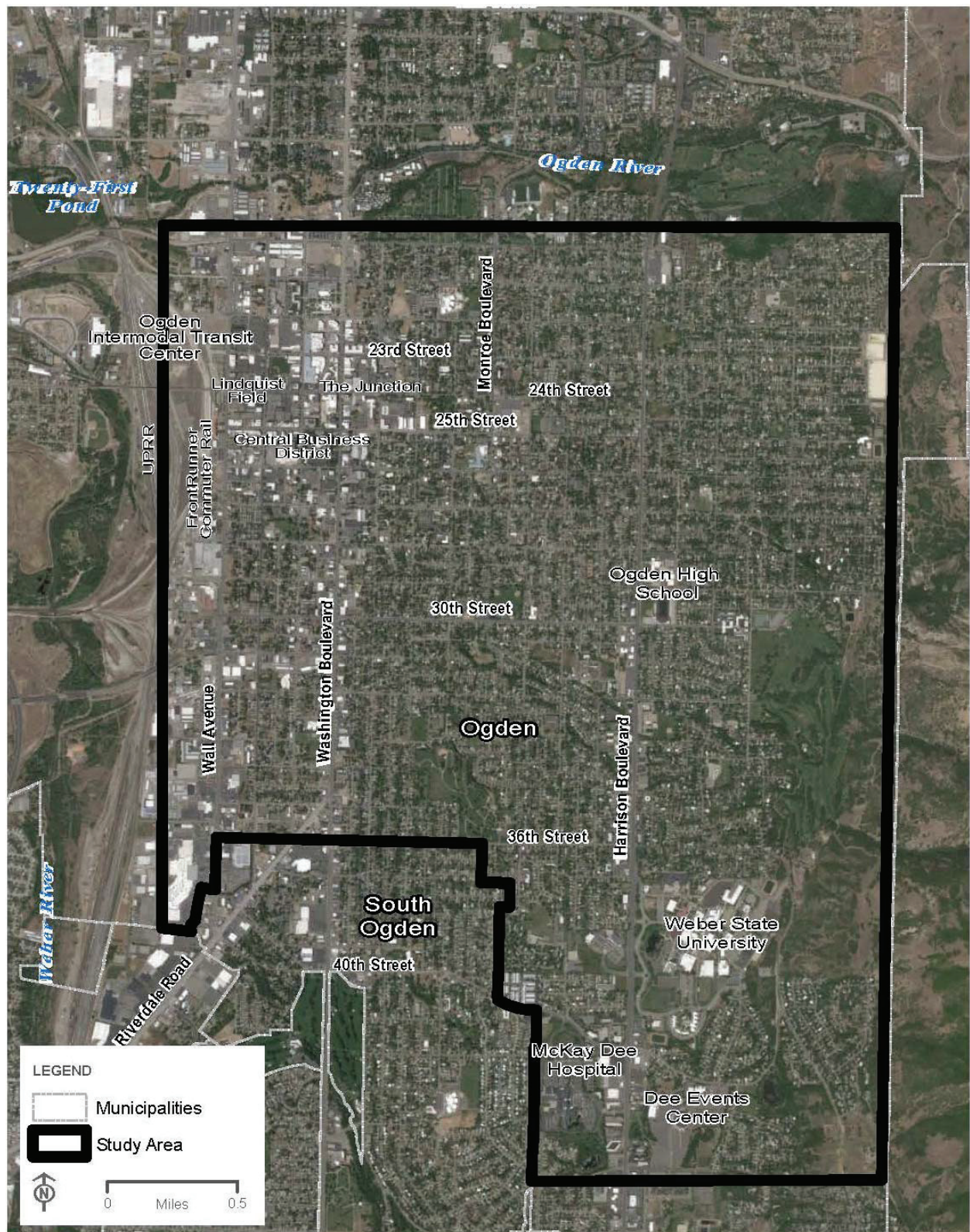
Implementation of the No-Action Alternative would not result in adverse impacts to water quality. The affected environment (existing conditions) would remain unchanged from current conditions.

Project Study Area. The project study area encompasses a 5.3-mile corridor between downtown Ogden, Weber State University, and McKay-Dee Hospital. The project study area is located in the city of Ogden in Weber County, Utah. The project study area encompasses a portion of downtown central Ogden bounded by the Union Pacific Railroad line to the west, 20th Street (State Route [S.R.] 104) to the north, the city limits at the base of the Wasatch Mountains to the east, and about 4600 South to the south, the southwestern part of which follows the Ogden/South Ogden municipal boundary (Figure 1).

This project study area includes the following major destinations and Ogden neighborhood districts that could be served by the Action Alternative (Figure 2):

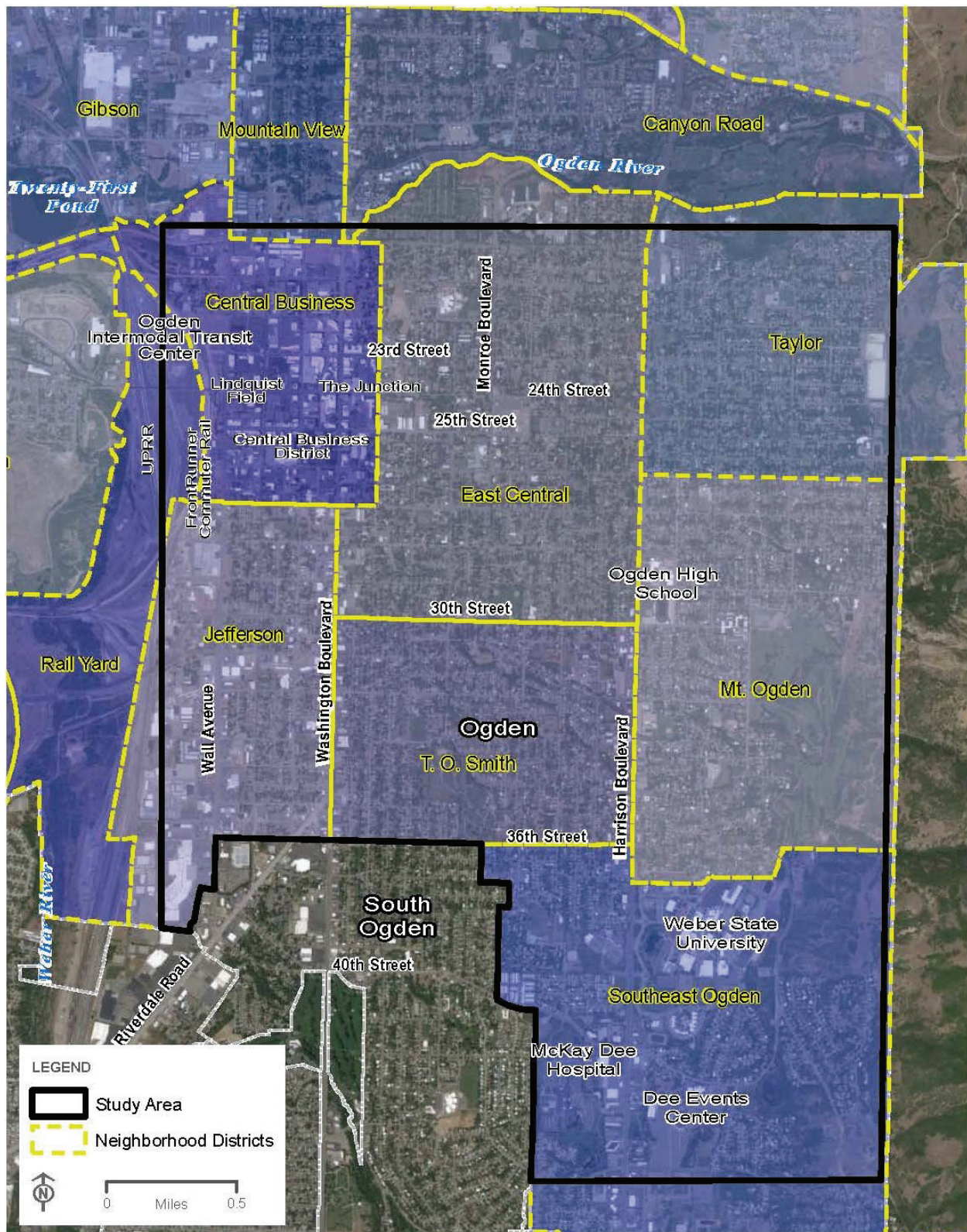
- The Ogden Intermodal Transit Center (FrontRunner operates frequent service from Ogden to Provo, an 88-mile route)
- Lindquist Field, a minor-league baseball stadium with an 8,262-person capacity
- The Junction, a 20-acre entertainment, residential, retail, and office mixed-use redevelopment
- The Ogden downtown central business district, which includes city, county, and federal offices
- Seven neighborhood districts: Central Business (downtown), East Central, Taylor, Jefferson, T.O. Smith, Mt. Ogden, and Southeast Ogden
- Ogden High School, with an annual enrollment of about 1,000 students in grades 10–12
- Weber State University, with about 2,500 faculty and staff and about 25,000 students (up from 17,000 in 2007), 840 of whom lived on campus as of September 2016 (Sears 2016)
- The Dee Events Center, a 12,000-seat sports and entertainment venue with a 3,000-space parking lot
- The McKay-Dee Hospital Center (at 2,300 employees, the fourth-largest hospital in Utah)

Figure 1. Project Study Area



OGDEN/WEBER STATE UNIVERSITY TRANSIT PROJECT
STUDY AREA

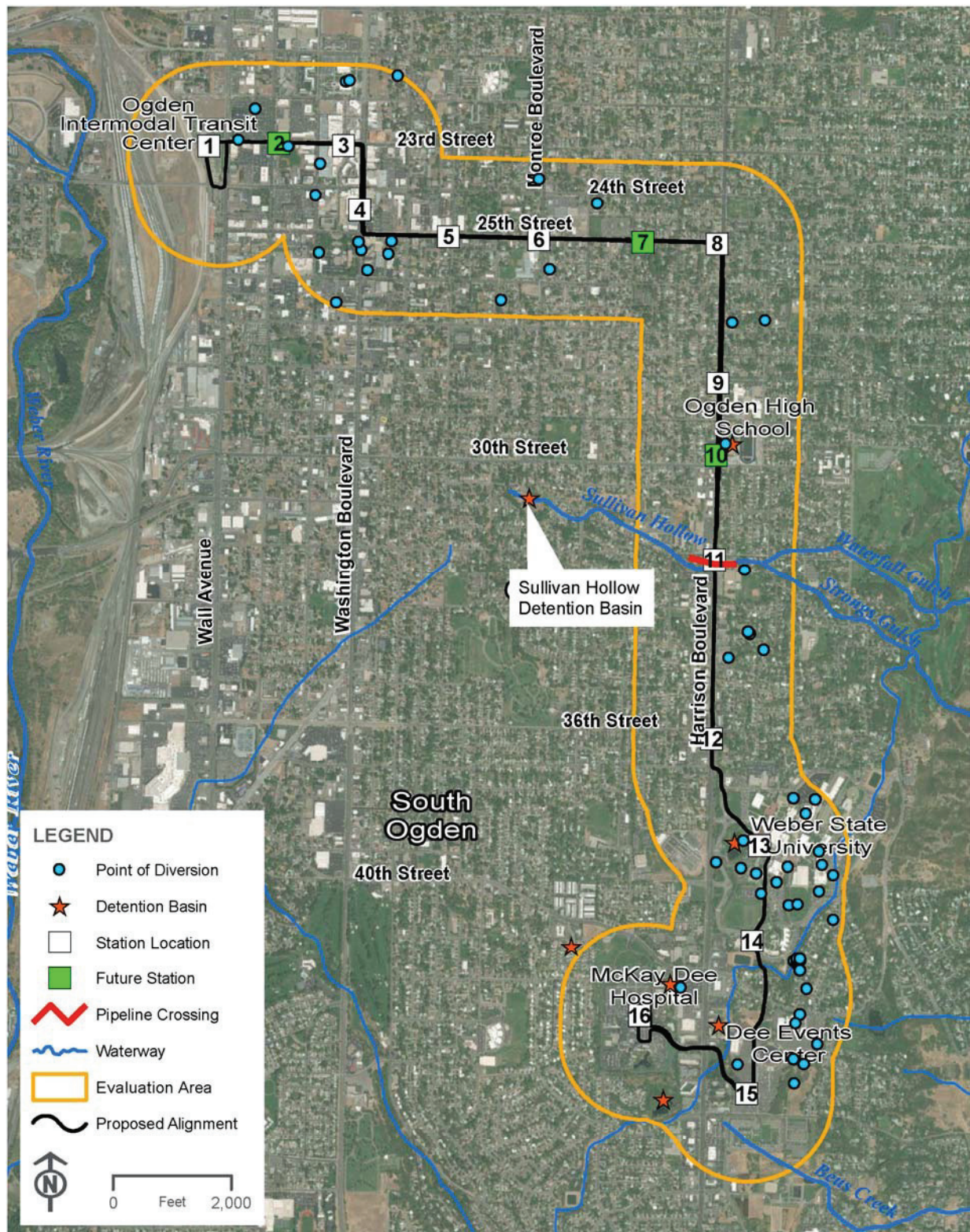
Figure 2. Neighborhood Districts



Ogden is one of the oldest communities in Utah and has a number of historic districts and neighborhoods. Much of central Ogden is served by a traditional grid street system, and a number of the major arterials are state highways managed by the Utah Department of Transportation (UDOT) which serve regional travel through Ogden. These major arterials are Washington Boulevard (S.R. 89), Harrison Boulevard (S.R. 203), and 30th Street (S.R. 79). Harrison Boulevard is part of the National Highway System and is a major north-south arterial that serves an important statewide transportation function through Utah by connecting Washington Boulevard (S.R. 89), Weber State University, and 12th Street (S.R. 39). The Union Pacific Railroad (UPRR) line and the Ogden Intermodal Transit Center are on the western edge of the city, and Interstate 15 is just west of the city.

Water Quality Evaluation Area. The water quality evaluation area focuses on the Action Alternative and all areas within one-half mile of the alignment centerline (Figure 3). This evaluation area includes portions of surface and stormwater features that could be affected by project construction and BRT operation.

Figure 3. Water Quality Evaluation Area



OGDEN/WEBER STATE UNIVERSITY TRANSIT PROJECT
WATER QUALITY EVALUATION AREA

2.0 Project Description

The Federal Transit Administration (FTA) and the Utah Transit Authority (UTA), in cooperation with project partners Ogden City, Weber County, the Wasatch Front Regional Council (WFRC), UDOT, Weber State University, and McKay-Dee Hospital, have prepared an Environmental Assessment under the National Environmental Policy Act (42 United States Code §§ 4321–4347) for the Ogden/Weber State University Transit Project.

Proposed Transit Corridor. The proposed transit corridor is the alignment of the Action Alternative (Figure 4). The bus rapid transit (BRT) route for the Action Alternative would be about 5.3 miles long (10.6 miles round trip), with a western terminus at the Ogden Intermodal Transit Center. From there, the BRT route would head east in mixed-flow traffic on 23rd Street to Washington Boulevard, south on Washington Boulevard to 25th Street, east on 25th Street to Harrison Boulevard, and south on Harrison Boulevard. At about 31st Street and Harrison Boulevard, the BRT route would transition to center-running, bus-only lanes. It would continue on a dedicated busway through the Weber State University campus and then travel west to McKay-Dee Hospital, where it would again travel in mixed-flow traffic. The BRT route would loop back on the same route.

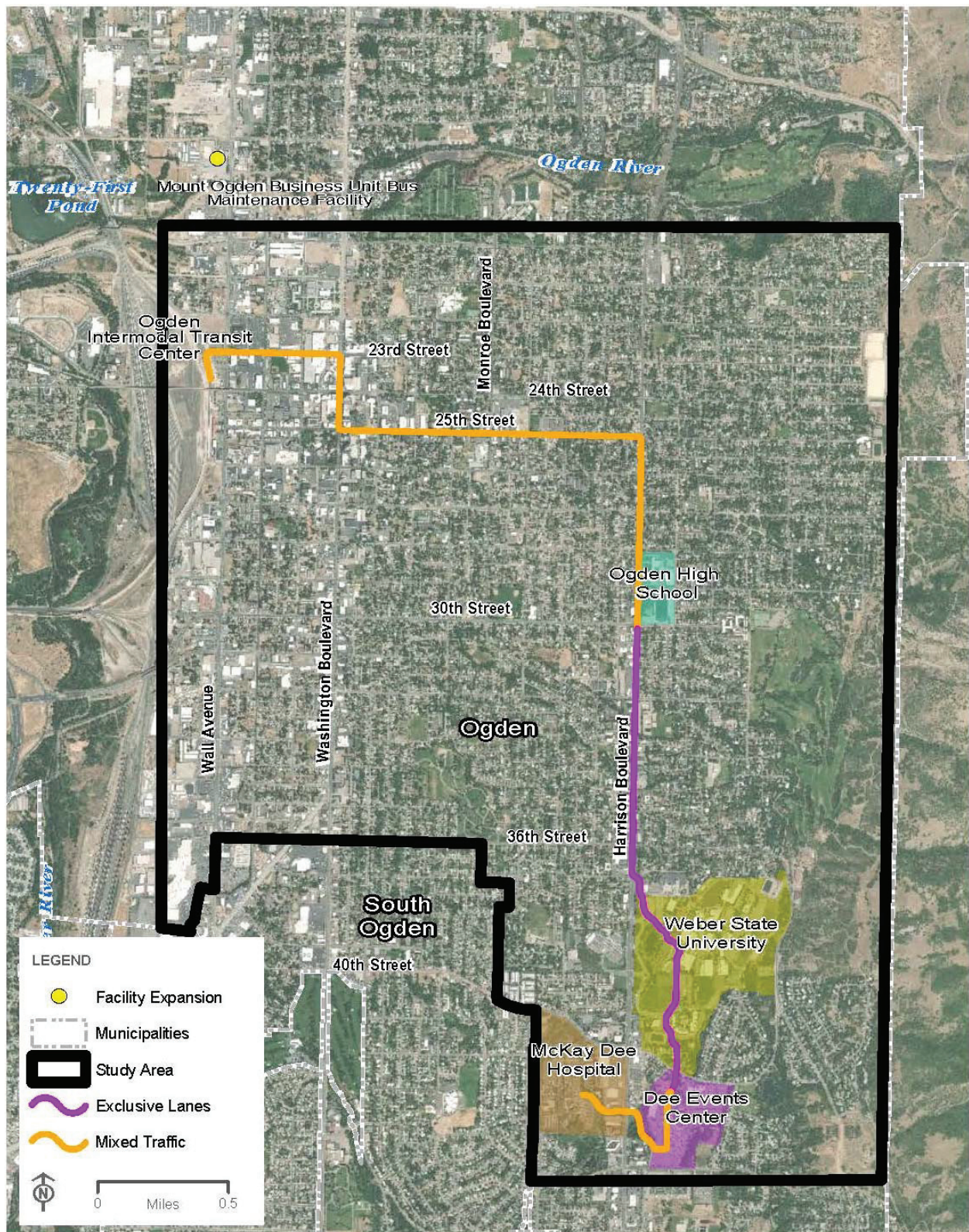
Station Locations. The Action Alternative includes 16 brand-identified stations. The station locations were chosen during the project’s Alternatives Analysis update process. Station spacing ranges from about 0.25 mile apart to about 0.50 mile apart; several stations on Harrison Boulevard would be farther apart because of the spacing of major destinations.

Of the proposed 16 stations, 11 are existing bus route 603 stations (including the termini at the Ogden Intermodal Transit Center and McKay-Dee Hospital) that would be enhanced as part of the Action Alternative. The project team agreed that not all 16 stations would be constructed for the BRT service’s opening day (2020). Three of the 16 stations are designated as future stop locations. The existing route 603 bus currently stops at two of these three locations, and those locations would be discontinued and new enhanced stations would be constructed in their place in the future based on ridership and station demand.

Station Amenities. The Action Alternative stations would include a platform, canopy, landscaped planter, and station amenities. The station would sit on a concrete bus pad elevated above the sidewalk curb height between 6 and 9 inches above the street grade. Stations would be about 125 feet long, with a platform length of 100 feet to accommodate two 40-foot-long BRT vehicles. Station shelters would be roughly comparable in size to existing UTA bus passenger shelters in the area, though somewhat longer.

At present, UTA anticipates that the shelters would be designed to include a combination of glass panels and solid support members that would have a minimal visual “footprint.” Station canopies would be opaque features that provide shelter from sun and rain and would be about 10 to 15 feet high, depending on the incorporation of decorative architectural features that would be determined during final design.

Figure 4. Action Alternative



OGDEN/WEBER STATE UNIVERSITY TRANSIT PROJECT
ACTION ALTERNATIVE



The platform provides the area for passenger waiting, boarding, and station amenities. The station platform would range from 8 to 25 feet wide, depending on the station location and the need for a platform to accommodate either single-direction travel or both southbound and northbound travel. Station amenities could include ticket vending machines, seating, lighting, a canopy and wind screens, garbage receptacles, and wayfinding information (maps and signs).

Mount Ogden Business Unit Bus Maintenance Facility Expansion. In conjunction with the Action Alternative, UTA would expand the existing Mount Ogden Business Unit Bus Maintenance Facility located at 175 W. 17th Street in Ogden. The Mount Ogden facility is currently operating at maximum capacity and cannot accommodate the additional eight BRT vehicles needed for the Action Alternative. As a result, the existing Mount Ogden facility would be renovated and expanded.

Operations at the Mount Ogden facility would continue to include maintenance, repairs, inspections, and cleaning for the existing bus fleet and the additional BRT vehicles. The BRT vehicles would be maintained and stored overnight at this facility. The north maintenance building would be expanded to the east by about 8,000 square feet, remaining within property currently owned by UTA and remaining within the existing parking lot pavement area; no additional right-of-way would be required. The expansion would consist of four new bus maintenance bays, which are covered areas for maintaining the new BRT vehicles as well as buses already in the fleet. The expansion would bring the existing facility from about 32,000 square feet to just under 40,000 square feet.

23rd Street and 25th Street Roadway Improvements. To further support the Action Alternative, Ogden City would upgrade portions of 23rd Street and 25th Street to better accommodate the Action Alternative. 25th Street would be rebuilt from the bottom up, and, in certain instances, water mains would be replaced, storm sewers would be installed, and sanitary sewers would be repaired. Depending on the extent of the utility work, curbs might be fully replaced. Ogden City would also upgrade the roadway infrastructure on portions of 23rd Street between Wall Avenue and Kiesel Avenue to better support the Action Alternative and active transportation (walking and bicycling). Improvements would include adding a traffic signal at Lincoln Avenue, restriping, adding bicycle lanes, adding crosswalks, reconstructing curbs, and reconfiguring parking.

3.0 Regulatory Setting

3.1.1 Surface Water

The Utah Division of Water Quality designates beneficial uses for each water body in the state. The Division of Water Quality then monitors, assesses, and regulates Utah's water bodies to determine whether their beneficial uses are met. Streams for which the State has designated beneficial uses are listed in Utah Administrative Code R317-2-13, Classification of Waters of the State, and are subject to review as part of the State's water quality reporting process. None of the water bodies in the evaluation area have any designated beneficial uses. (Strong's Gulch has designated beneficial uses far upstream of the evaluation area.)

Waters of the United States are subject to regulation under Sections 401 and 404 of the Clean Water Act. The Ogden/Weber State University Transit Project would not require authorization for discharging fill to waters of the United States, so UTA would not need to demonstrate compliance with Sections 401 and 404.

3.1.2 Stormwater

Water quality is also regulated through the Clean Water Act. Pursuant to Section 402 of the Act, if construction activity would disturb 1 or more acre of land, then the project proponent would need to demonstrate compliance with the State's general permit for construction-related stormwater discharges. In Utah, Section 402 stormwater permits are issued through the Utah Division of Water Quality. To comply, UTA or its contractor would submit a notice of intent to comply with the general permit and would prepare a stormwater pollution prevention plan for the project.

Under Utah state law, Ogden City must meet the requirements of a small municipal separate storm sewer system (MS4) permit. The permit consists of six control measures:

- Public education and outreach
- Public participation and involvement
- Illicit discharge detection and elimination
- Construction site runoff control
- Postconstruction runoff control
- Pollution prevention and good housekeeping

Ogden City's 2010 Storm Water Management Plan (Ogden City 2010) follows these six control measures. Any project-related changes that would affect the stormwater system would need to be consistent with the MS4 permit and the Storm Water Management Plan.

4.0 Affected Environment

4.1 Surface Waters and Storm Drain Features

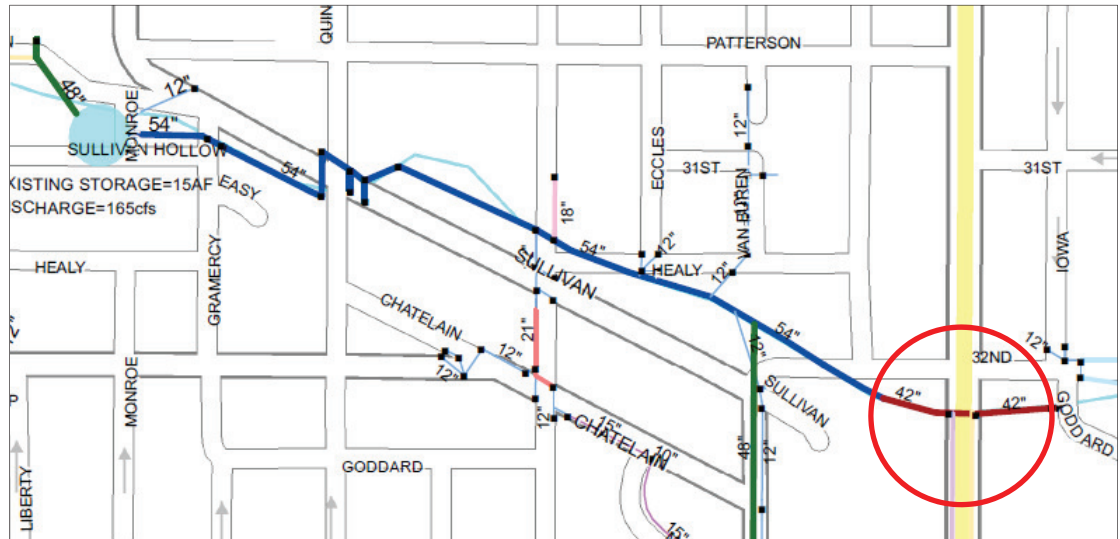
The Ogden region is made up of 38 square miles of mountainsides, foothills, hillside neighborhoods, and downtown urban areas. Stormwater from this entire surface area is collected into four major detention basins, 22 detention ponds, and a system of water pipes, ditches, and catch basins (Ogden City 2016). In general, the existing surface water system directs water north and west to locations where it ultimately drains to the Weber River.

Along the Action Alternative, surface water is managed via a system of catch basins, pipes, and detention basins. The evaluation area includes numerous pipelines and the following six detention basins:

- On the northeast corner of Harrison Boulevard and 30th Street (30th Street detention basin)
- On the east side of Harrison Boulevard on the Weber State University campus at about 39th Street (known locally as the Weber State University Duck Pond)
- On the west side of Harrison Boulevard at about 42nd Street (known locally as Smith's Pond)
- On the east side of Harrison Boulevard at about 44th Street (44th Street detention basin)
- On the west side of Harrison Boulevard at about 45th Street (45th Street detention basin)
- Near the intersection of Country Hills Drive and 900 East, south of Country Hills Drive (Country Hills detention basin)

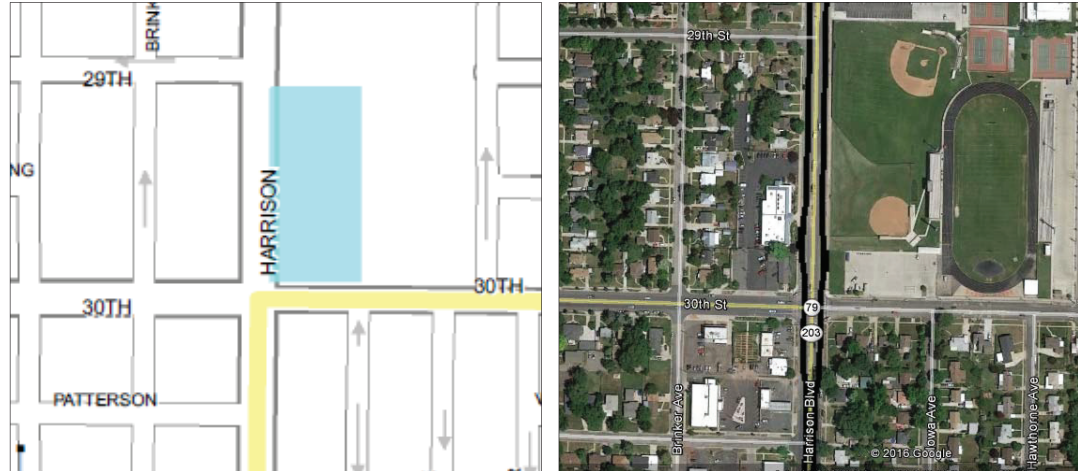
Waterfall Gulch and Strong's Gulch, which are above-ground streams east of the evaluation area, merge to a confluence in the evaluation area at Tyler Avenue and 32nd Street and are directed into a 42-inch pipe at Goddard Road, which is east of Harrison Boulevard. This pipe crosses under Harrison Boulevard just south of 32nd Street, and the combined flow appears to be directed into Sullivan Hollow. Sullivan Hollow runs east to west from downstream of Harrison Boulevard and 32nd Street in a 54-inch pipe that intersects with several smaller pipes. The 54-inch pipe eventually discharges into the Sullivan Hollow detention basin at about Madison Avenue and Patterson Street, which is more than a half mile west of Harrison Boulevard (Figure 5).

Figure 5. Location of 42-inch Pipe Crossing and Connection to Sullivan Hollow Detention Basin



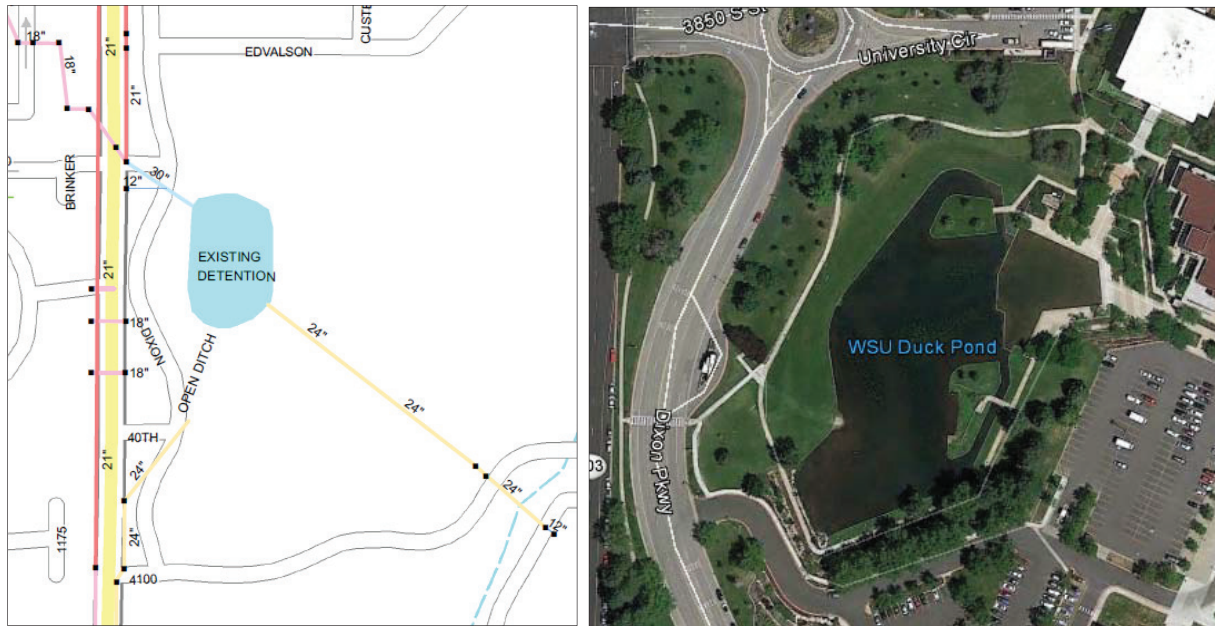
The 30th Street detention basin is located on the Ogden High School sports fields (Figure 6). The 30th Street detention basin collects local drainage.

Figure 6. 30th Street Detention Basin



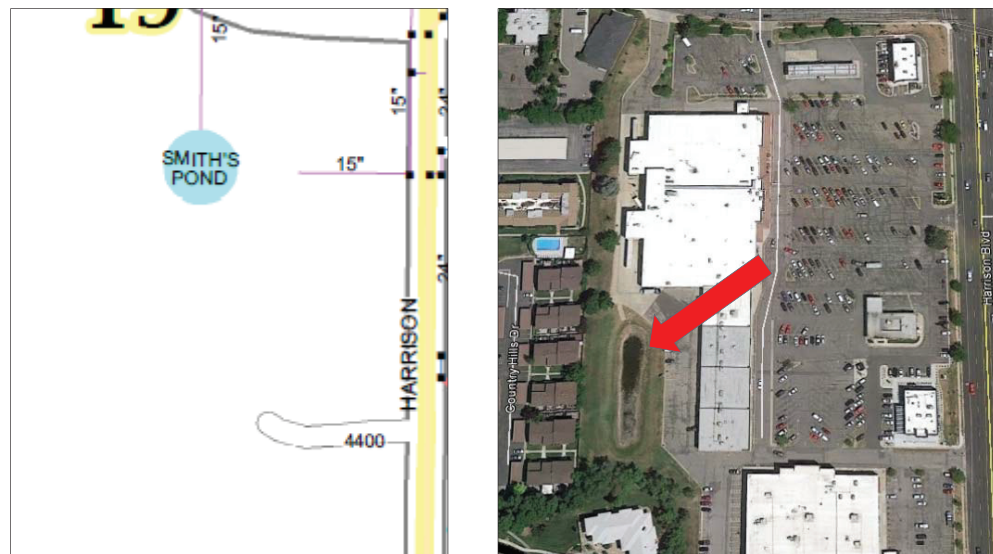
The Weber State University Duck Pond, which is normally inundated and is a visual campus amenity, receives drainage via a 24-inch pipe that comes from the southeast, a 30-inch pipe that comes from Harrison Boulevard, and an open channel that is part of landscaping southwest of the pond (Figure 7). The Weber State University Duck Pond is not a natural feature and is thus is not regulated as a water of the United States.

Figure 7. Weber State University Duck Pond and Associated Storm Drain Features



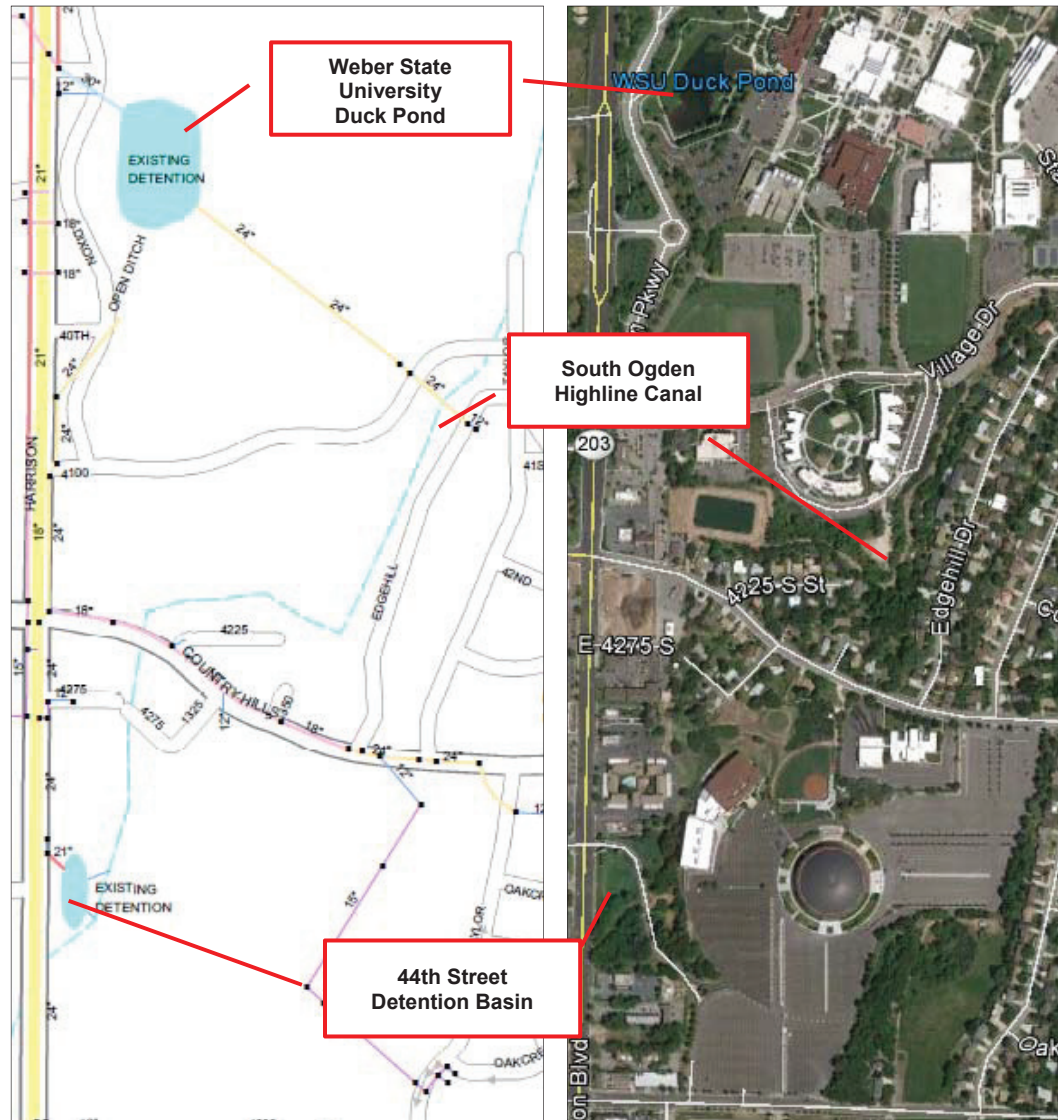
The Smith's Pond detention basin is located west of (behind) the Smith's grocery store on the west side of Harrison Boulevard (Figure 8). Smith's Pond receives local drainage and drainage via a 15-inch pipe that comes from the north.

Figure 8. Smith's Pond Detention Basin



The 44th Street detention basin is located in an open area at the gateway to the Dee Events Center. This basin collects overflow from the South Ogden Highline Canal and from a 21-inch pipe that is connected to a catch basin at Harrison Boulevard (Figure 9). The South Ogden Highline Canal, which is owned by the U.S. Bureau of Reclamation, flows through the evaluation area in a pipe. The canal generally runs north to south and is within and/or adjacent to the east side of the evaluation area between about 40th Street and 46th Street.

Figure 9. Route of South Ogden Highline Canal and 44th Street Detention Basin

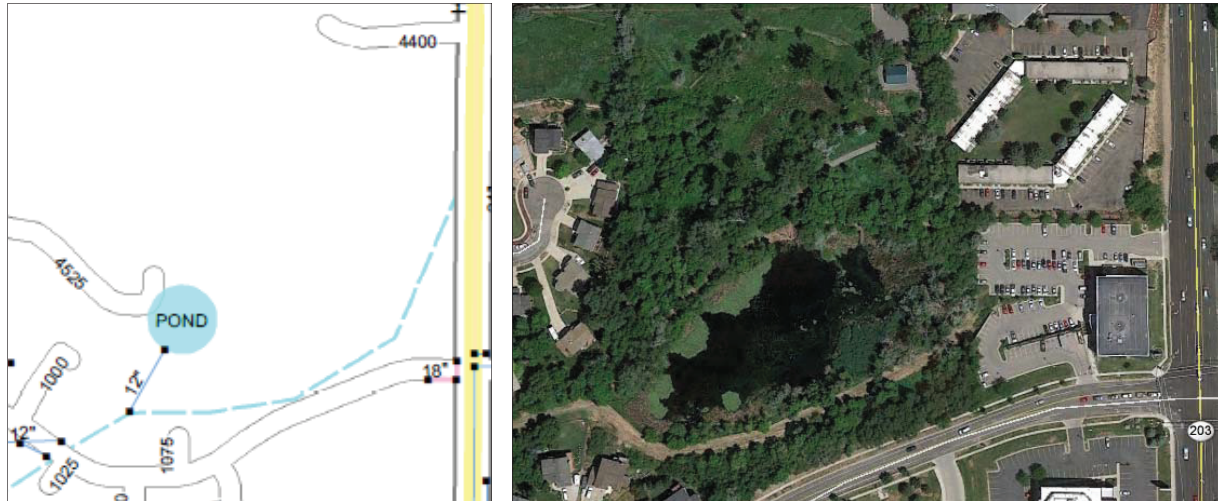


The 45th Street detention basin is a pond that is located in an undeveloped area south of the McKay-Dee Hospital complex (Figure 10). This basin receives local drainage and drainage via a 12-inch pipe that is connected to the South Ogden Highline Canal.

In addition, a 2.4-acre detention/overflow basin owned by the U.S. Bureau of Reclamation is located just north of 4225 South and south of Village Drive. This detention/overflow basin is

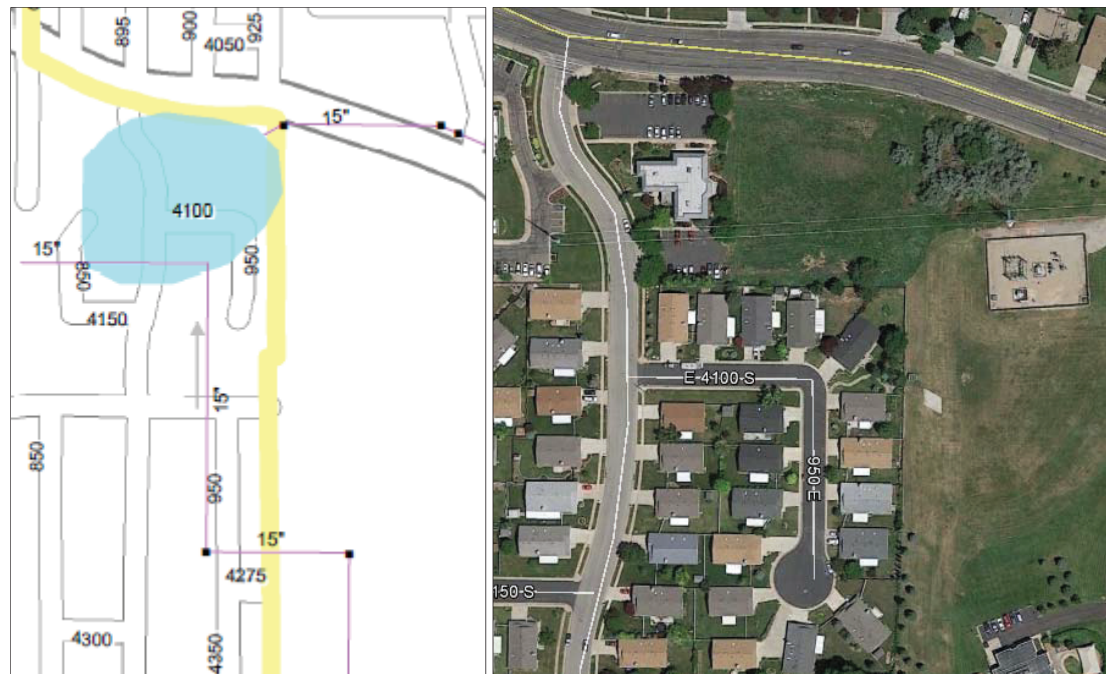
not included on the City's stormwater master plan since it is a federal facility and is not part of the City's stormwater system. The detention/overflow basin is part of the South Ogden Highline Canal system and sits adjacent to, but above, the proposed BRT alignment. The detention/overflow basin is not a natural feature and thus is not regulated as a water of the United States. The BRT would not affect the detention/overflow basin.

Figure 10. 45th Street Detention Basin



The Country Hills detention basin is located in a large open space just west of the Country Hills Drive entrance to the McKay-Dee Hospital complex (Figure 11). This detention basin receives local drainage and drainage via a 15-inch pipe from the northeast.

Figure 11. Country Hills Detention Basin



4.2 Existing Water Right Points of Diversion

All waters in Utah are public property. A “water right” is a right to divert (remove from its natural source) and beneficially use water (Utah Division of Water Rights 2011). The defining elements of a typical water right include:

- A defined nature and extent of beneficial use,
- A priority date,
- A defined quantity of water allowed for diversion by flow rate (cubic feet per second) and/or by volume (acre-feet),
- A specified point of diversion and source of water, and
- A specified place of beneficial use.

What are water right points of diversion?

Water right points of diversion are locations from which water can legally be diverted from a source and beneficially used.

Water right points of diversion (WRPODs) are locations from which a water right owner can legally divert water from a source and beneficially use it. WRPODs are overseen by the Utah Division of Water Rights, which regulates the appropriation and distribution of water in Utah. Knowing the location of and protecting existing WRPODs is important from the perspective of ensuring that a project does not affect the water quality of, and therefore the beneficial uses associated with, existing WRPODs.

Figure 3 above shows that there are many legal points of diversion in the evaluation area. Of the 62 total points of diversion, 24 are owned by Weber State University. All of the University’s WRPODs are underground. The sources of 16 of these WRPODs are springs and runoff water, six of them are non-production wells with unknown sources, one is a non-production well sourced by closed loop heat exchange, and one of them was recently terminated (most likely consolidated into another right) but was sourced by underground and surface runoff. All 16 of the University’s active WRPODs are for the beneficial use of irrigation. Other WRPODs in the evaluation area are owned by private parties, businesses, churches and other organizations, and Weber County Corporation.

There are three surface WRPODs in the evaluation area, all of which are associated with springs. One of the surface WRPODs is owned by Ogden City, and the remaining two are owned by a private party. All three of the surface WRPODs are for the beneficial use of irrigation, and the one owned by Ogden City is also for the beneficial uses of stock watering and domestic use.

4.3 Drinking Water Source Protection Zones

There are no drinking water source protection zones in the evaluation area.

5.0 Environmental Consequences

5.1 Regulatory Setting

5.1.1 Surface Water

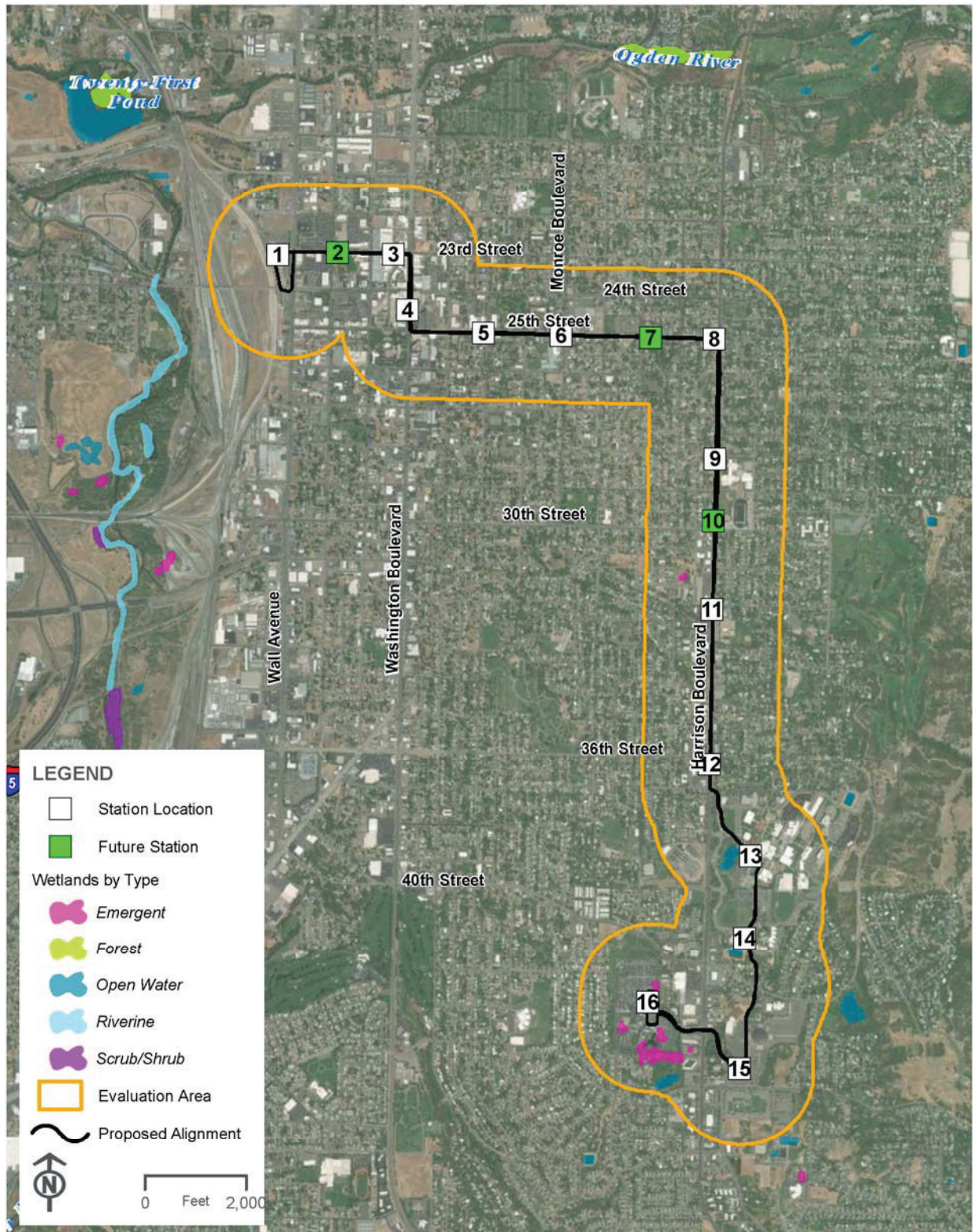
The Utah Division of Water Quality designates beneficial uses for each water body in the state. The Division of Water Quality then monitors, assesses, and regulates Utah's water bodies to determine whether their beneficial uses are met. Streams for which the State has designated beneficial uses are listed in Utah Administrative Code R317-2-13, Classification of Waters of the State, and are subject to review as part of the State's water quality reporting process. None of the water bodies in the evaluation area have any designated beneficial uses. (Strong's Gulch has designated beneficial uses far upstream of the evaluation area.)

Waters of the United States are subject to regulation under Sections 401 and 404 of the Clean Water Act. As shown in Figure 12, according to the U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) maps, several surface waters and wetlands are present in the water quality evaluation area (see Figure 12), but they would not be directly affected by the Action Alternative. North of 31st Street and Harrison Boulevard, the Action Alternative would operate solely within the existing transportation right-of-way. Station platforms would be built on existing impervious surfaces primarily within the right-of-way. There are no wetlands close to the right-of-way north of 31st Street and Harrison Boulevard.

The new Action Alternative busway through the Weber State University campus would come close to a few wetlands, as shown in Figure 12. The 2.25-acre University duck pond is considered a freshwater pond that was created rather than naturally occurring. The Action Alternative busway would not affect the duck pond, and measures will be taken to ensure that construction does not affect the pond. Another constructed pond—the 2.4-acre detention/overflow basin owned by the U.S. Bureau of Reclamation located just north of 4225 South and south of Village Drive—is also close to the proposed busway. However, the basin is uphill of the proposed busway and would not be affected. Similarly, the ponds near McKay-Dee Hospital are also far enough away from the Action Alternative alignment and would not be affected.

The Ogden/Weber State University Transit Project would have no anticipated temporary or permanent impacts to wetland areas. The Ogden/Weber State University Transit Project would not require authorization for discharging fill to waters of the United States, so UTA would not need to demonstrate compliance with Sections 401 and 404 of the Clean Water Act.

Figure 12. NWI Mapped Wetlands in the Water Quality Study Area



OGDEN TRANSIT CORRIDOR
NWI MAPPED WETLANDS IN THE WATER QUALITY STUDY AREA

Source: USFWS 2018

5.1.2 Stormwater

Water quality is also regulated through the Clean Water Act. Pursuant to Section 402 of the Act, if construction activity would disturb 1 or more acre of land, then the project proponent would need to demonstrate compliance with the State's general permit for construction-related stormwater discharges. In Utah, Section 402 stormwater permits are issued through the Utah Division of Water Quality. To comply, UTA or its contractor would submit a notice of intent to comply with the general permit and would prepare a stormwater pollution prevention plan for the project.

Under Utah state law, Ogden City must meet the requirements of a small MS4 permit. The permit consists of six control measures:

- Public education and outreach
- Public participation and involvement
- Illicit discharge detection and elimination
- Construction site runoff control
- Postconstruction runoff control
- Pollution prevention and good housekeeping

Ogden City's 2010 Storm Water Management Plan (Ogden City 2010) follows these six control measures. Any project-related changes that would affect the stormwater system would need to be consistent with the MS4 permit and the Storm Water Management Plan.

5.2 No-Action Alternative

With the No-Action Alternative, the BRT and other facilities associated with the Action Alternative would not be constructed. The No-Action Alternative includes the existing transportation system and all projects in WFRC's 2015–2040 Regional Transportation Plan that are programmed to be completed within the project study area by 2020, the anticipated opening year for the Action Alternative's BRT.

The No-Action Alternative includes current UTA route 603 bus service in the proposed transit corridor using standard buses. Typical UTA buses would continue serving existing bus stops in the project study area with no additional infrastructure construction. With the No-Action Alternative, there would not be any changes to surface water or stormwater system drainage as a result of the Action Alternative. The volume of runoff and pollutant loading (pollutants added to water bodies) would be the same as under the existing conditions, and water quality in the evaluation area would not change from the current conditions.

5.3 Action Alternative

North of 31st Street. North of 31st Street, the Action Alternative would not require any substantial construction that could affect the storm drain system or the 30th Street detention basin. Constructing transit stops would not disturb any part of the stormwater system. Implementing the Action Alternative in this area would not affect water quality. The locations of existing points of diversion north of about 31st Street are well outside the area that would be disturbed during project construction.

South of 31st Street. South of 31st Street, the Action Alternative would cross the pipe carrying the combined flow of Waterfall Gulch and Strongs Gulch at about 32nd Street. The Action Alternative crosses this pipe in an area where the existing roadway would be widened to the west to allow bus-only lanes in the center of Harrison Boulevard. As a result, the Action Alternative could require modifying up to about 150 linear feet of the pipe west of Harrison Boulevard. The pipe would be modified so that it could accommodate the same flow and would be compatible with the existing stormwater system. Because the system would remain closed, the modification would not affect the quality of water that flows through the evaluation area and ultimately discharges to the Sullivan Hollow detention basin.

Weber State University. The Action Alternative would require constructing a new single bus lane adjacent to the Weber State University Duck Pond at about 39th Street. The Action Alternative would not encroach into the Duck Pond detention area in a way that reduces capacity or that would result in additional discharge directly to the pond. The Action Alternative would include a drainage system that is compatible with the existing system.

South Ogden Highline Canal. The Action Alternative would also cross the South Ogden Highline Canal at about 42nd Street. This canal crossing is in an area where a new bus lane on new right-of-way would be constructed. However, because the canal is underground, construction would not directly affect this water feature, though it would need to be protected in place. Crossing the feature would require UTA to obtain a license agreement from the U.S. Bureau of Reclamation because the Bureau owns the canal in fee title.

Detention Basins. A 2.4-acre detention basin associated with the South Ogden Highline Canal is located just north of 4225 South and south of Village Drive. Because this detention basin is a federal facility, it is not included in the City's stormwater master plan. The detention basin is part of the South Ogden Highline Canal system and sits on a hill adjacent to the Action Alternative alignment. The detention basin is not a natural feature, so it is not regulated as a water of the United States. The basin sits about 125 feet from the center of the Action Alternative busway to the edge of basin. The top of the basin ranges from roughly 20 feet above the busway to level with the busway as the busway climbs the hill and passes beyond the detention basin. The detention basin would not be affected by the Action Alternative.

Points of Diversion. South of about 36th Street, construction activity near the Duck Pond would be close to existing points of diversion. As part of the final design process, UTA will coordinate with all service providers and managers, including those managing points of diversion on the Weber State University campus, to ensure that the Action Alternative does not affect the place and purpose of use of any points of diversion along the proposed transit corridor.

Culinary Water Tanks. As shown in Figure 13, South Ogden City has an underground storage water tank buried just southwest of 1341 Country Hills Drive. According to South Ogden City public works personnel, the underground storage water tank is a large 1-million-gallon water reservoir, and the City has future plans to build another reservoir just west of the existing one on a currently empty lot (Hu 2018). The Action Alternative would not affect the existing storage reservoir nor the parcel to the west where the future reservoir is planned to be installed.

Figure 13. Water Tank Locations



Stormwater System. The part of the Action Alternative that would be in the existing right-of-way would not require any physical modifications to the roadway and, therefore, construction would not affect the existing stormwater system.

The Action Alternative would create about 10 acres of new roadway surface in the evaluation area, all of which would be south of 31st Street. This increase in impervious area would slightly increase the volume stormwater runoff from the Action Alternative and could also slightly increase pollutant loading to the stormwater system. However, given the urban nature of the evaluation area and amount of existing impervious surfaces in the evaluation area, the additional impervious area and associated increase in runoff are unlikely to substantially affect the pollutant load for the entire watershed.

The existing stormwater system has adequate capacity to accommodate the small amount of additional discharge, and the additional discharge would not jeopardize the system's overall function. The additional stormwater discharge would be managed as part of the existing stormwater system in accordance with Ogden City's MS4 permit.

Activity along the segment of Harrison Boulevard that would be widened south of 31st Street could affect the stormwater system if the activity were to require moving or modifying stormwater collection features that are part of the roadway (for example, construction could require moving stormwater inlets). As currently proposed, the stormwater system modifications south of 31st Street would be designed and implemented so that they are compatible with the existing system.

The busway through the Weber State University campus would cross stormwater and culinary water lines. UTA will verify the depths of the existing utilities during the final design process to ensure that the stormwater and culinary water lines remain adequately covered and protected in place.

Permits and Plans. As part of the final design process, UTA would coordinate with all service providers and managers, including Ogden City and the Bureau of Reclamation, regarding the stormwater system's pipes and detention basins. Prior to construction, UTA or its construction contractor would obtain a general permit for construction activities under the Utah Pollutant Discharge Elimination System from the Utah Division of Water Quality. A detailed Stormwater Pollution Prevention Plan (SWPPP) would be prepared to control stormwater runoff and erosion at construction sites. This plan would contain specific structural and procedural measures, including best management practices (BMPs), to reduce stormwater impacts.

Construction Effects. Constructing the Action Alternative would disturb more than 1 acre of land. Most of this disturbance would be a result of the new alignment through the Weber State University campus. Because the amount of disturbance would exceed 1 acre, UTA would need to demonstrate compliance with the State's general permit for stormwater construction discharges. To comply with this requirement, UTA or its contractor would prepare a stormwater pollution prevention plan and file a notice of intent with the Utah Division of Water Quality. Without erosion-control BMPs, ground clearing, excavation, grading, and soil stockpiling could stimulate soil erosion that could increase turbidity downstream. However, the Action Alternative would be constructed using erosion-control BMPs described in the stormwater pollution prevention plan, which would reduce this risk.

Construction activity would also require the use of potentially hazardous materials such as diesel fuel. BMPs that address the proper handling and storage of these types of materials would reduce water quality–related risk associated with accidental spills on the construction site.

5.3.1 Water Quality Protection Measures

Applying the following measures would reduce or prevent project-related water quality impacts:

- Prepare and implement the required stormwater pollution prevention plan for the construction phase of the project. Monitor the effectiveness of BMPs and modify BMPs as needed to address water quality concerns.
- Coordinate with Weber State University to ensure that constructing new right-of-way through the campus would not affect the use of or access to existing legal points of diversion.
- Coordinate with Weber State University to verify the depths of existing storm drains and water lines to ensure proper cover where the busway section could reduce cover. Protect utilities in place.
- Prepare a Spill Prevention Control and Countermeasures Plan. This plan will include the following elements:
 - General site information useful in construction planning, recognizing potential sources of spills, and identifying personnel responsible for managing and implementing the plan.
 - Staging, storage, maintenance, and refueling areas and their relationship to drainage pathways, waterways, and other sensitive areas. Specifically address equipment maintenance, refueling, and cleaning activities and on-site storage areas for hazardous materials.
 - Spill prevention and containment methods to be used during project construction.
 - Spill response procedures including assessment of the hazard, securing spill response and personal protective equipment, containing and eliminating the spill source, and mitigation, removal, and disposal of the material.

6.0 References

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