

The expected population growth in the southern portion of Washington County would drive the need for further development of existing groundwater sources. Recent development trends in developing groundwater resources from the shallow and principal aquifers would continue to support development. Continued operation of the existing airport facility should have no impact to groundwater quality.

Because of the warm dry climate in southern Utah, there are very few occasions when airports need to provide deicing services for departing aircraft. Based on 2004 records⁶⁷, SkyWest uses approximately 110 gallons of deicing fluid (e.g., ethylene or propylene glycol) each season. The deicing fluid is mixed in a 50/50 solution (i.e., equal parts of glycol and water) with water to form a diluted quantity of 220 gallons of deicing solution. Deicing occurs at the gate approximately 15 to 20 times a season. The diluted deicing runoff is captured by the airport's existing drainage system and is conveyed to designated surface areas on and off-airport.

Under the No-Action Alternative, no construction associated with the airport would occur that would impact groundwater resources or aquifer recharge areas. Recent trends in developing groundwater resources of the shallow and principal aquifers in the vicinity of St. George would continue to support development and would cause minimal direct or indirect impacts to groundwater quality. The No-Action Alternative would not affect public or private wells or water rights.

6.7.4 POTENTIAL DIRECT AND INDIRECT IMPACTS OF THE PROPOSED REPLACEMENT AIRPORT

The construction and operation of the proposed replacement airport could affect water quality. Soil erosion and spills of petroleum products, which could potentially occur during construction, could contaminate surface runoff. Normal airport and aircraft operations could potentially generate petroleum wastes that represent a source of water pollution. These wastes could occur through leaks or spills from tanker trucks on the apron, aircraft maintenance and repair services, and aircraft and service vehicles. Deicing operations, although very limited, also could contribute to water pollution. It is anticipated that the same frequency of deicing events would occur at the proposed replacement airport.

With the forecast decrease in the number of operations to occur during the planning period,⁶⁸ the number of aircraft needing to be deiced may decrease, but the size of the aircraft would increase, which would most likely result in no net change in the amount of deicing fluid required over what is used under current conditions. The use of deicing solutions is dictated solely by weather patterns.

Following storm events, the Fort Pearce Wash carries surface water to the Virgin River, located approximately three miles northwest of the proposed replacement airport site. The Fort Pearce Wash would be the main receiving water for stormwater discharges at the replacement airport site. The City of St. George must obtain UPDES permits from the Utah Division of Water Quality to discharge

⁶⁷ Email from Dave Ulane, City of St. George, to Mark Johnson, Landrum & Brown; January 25, 2005. Information was available for the airport as a whole, no records were available on a per flight basis.

⁶⁸ See **Appendix E, Aviation Activity Forecasts.**

stormwater discharges at the replacement airport site. The City of St. George must obtain UPDES permits from the Utah Division of Water Quality to discharge stormwater into the Fort Pearce Wash resulting from construction (see **Section 6.16, Construction Impacts**) and operations (i.e., coverage under the State's General Permit for Industrial Activities). Additionally, on-site stormwater detention facilities may be required to provide short-term detention of stormwater as a treatment mechanism prior to its release into the Fort Pearce Wash. Obtaining the UPDES permit requires development of a Storm Water Pollution Prevention Plan (SWPPP) that includes a Temporary Erosion and Sediment Control Plan. The Temporary Erosion and Sediment Control Plan would identify best management practices (BMPs) as well as site-specific measures to minimize erosion and prevent eroded sediment from leaving the work zone.

The City of St. George relies on wells for its drinking water supply. New water lines would need to be installed to provide the proposed replacement airport with a culinary water supply. The development of the replacement airport should have no impact on local or regional drinking water sources. No municipal drinking water wells would be affected by developing and operating the replacement airport. There are several private groundwater wells located in close proximity to the proposed replacement airport site, with 11 of these wells being located on the proposed replacement airport property (see **Appendix J, Water Rights Data**). These wells are used for a combination of irrigation, stockwatering, and domestic water supply, depending on the specific water rights associated with each well. As part of the property acquisition process for the replacement airport, the City would be required to negotiate the transfer of the existing water rights to adjacent properties owned by the current landowners or determine the appropriate compensation for relocation of the well and associated water rights. This process would be coordinated with the UDEQ, Division of Water Rights (DWR).

Runoff both during and after construction of the proposed replacement airport and southern access roadway could potentially infiltrate the soil and reach any shallow aquifers. Due to the relatively small surface area affected by the replacement airport compared to the overall extent of an aquifer, minimal direct or indirect impacts to groundwater quality could occur. Stormwater and erosion control methods implemented throughout construction and operations of the airport should minimize the conveyance of the pollutants into groundwater sources. Since the construction of the proposed replacement airport would result in the potential discharge of pollutants into the Fort Pearce Wash, UDEQ must certify that the proposed activity would not violate state or Federal water quality standards. If the project is in compliance, UDEQ would issue a Section 401 Water Quality Certification in tandem with or in addition to the issuance of a Section 404 Permit from the USACE.

In addition to the measures outlined above and in an effort to further minimize downstream impacts on the Virgin River, the following measures would be given consideration for implementation by the city during construction and operation of the replacement airport facility:

- Secondary containment would be included in the design of bulk fueling and storage areas to capture incidental spills. Stormwater runoff from impervious surface areas up-gradient from fueling areas would be diverted to away from fueling and storage areas.
- A Stormwater Pollution Prevention Plan (SWPPP) would be developed for the airport and should identify all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges from the site, describe the practices to be used to reduce pollutants in stormwater discharges, and would assist with overall compliance with the terms and conditions of the permits obtained for construction and operation of the airport facility. The SWPP would also address how and where deicing operations occur to prevent the transportation of glycol off-site.
- Stormwater detention and retention basins should be constructed and utilized both during construction and operation of the replacement airport.

6.7.5 MITIGATION

The City of St. George would require the construction contractor to follow the procedures outlined in FAA AC 150/5370-10, *Standards for Specifying Construction of Airports*, to ensure that there are no long-term impacts to the existing surface water systems and water quality in the area. The city would require that oil traps and waste oil tanks be installed and used to handle petroleum wastes, and that absorbent material be used to remove small spills from work areas at the replacement airport both during and after construction. The city would obtain a UPDES permit from the Utah Division of Water Quality for the discharge of stormwater resulting from normal operations. A description of the impacts, permit requirements, and mitigation of potential stormwater impacts resulting from construction of the airport are discussed in **Section 6.16, Construction Impacts**.

THIS PAGE INTENTIONALLY LEFT BLANK