GARY R. HERBERT
Governor
GREG BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Water Rights

MICHAEL R. STYLER
Executive Director
KENT L. JONES
State Engineer/Division Director

March 20, 2012

LIVING RIVERS
C/O JOHN WEISHEIT
PO BOX 466
MOAB, UT 84532

Dear Interested Party: RE: Change Application a37400 (09-2349)

Please find enclosed a reply to your correspondence regarding the above-numbered application.

All documents relating to this application will become a permanent part of its file and used in the decision-making process.

If a hearing is held on this application, notice of this hearing will be sent at a later date to you and all interested parties.

Yours truly,

Kent L. Jones, P.E.
State Engineer

KLJ:sn
Enclosure

San Juan Spanish Valley Special Service District
4775 Sunny Acres Lane
Moab, Utah 84532

March 16, 2012

Kent L. Jones, State Engineer
Utah Division of Water Rights
1594 West North Temple, Suite 200
PO Box 146300
Salt Lake City, Utah 84114-6300

Dear Mr. Jones:

RE: Answer to Protests filed regarding Change Application Number a37400 (09-2349)

The San Juan Spanish Valley Special Service District (District) was created in 2011 by the San Juan County Commission to provide municipal water to future development in the San Juan County portion of Spanish Valley. The District acquired 5,000 acre-feet from the San Juan County Water Conservancy District and a Segregation Application was filed and it was assigned Water Right Number 09-2349 (A37788e). The District then filed Change Application Number a37400 to transfer the water to ground-water sources in Spanish Valley and Kane Springs area and from the Colorado River near Moab. The Change Application was advertised in the Times Independent and San Juan Record newspapers. A total of nineteen protests were filed. The District submits the following response to the protests. This response does not cover all claims submitted in the protests, but does addresses the meaningful issues raised and covers the statutory criteria of why the District believes the subject Change Application should be approved.

The District is committed to develop and manage the water resources within its area of stewardship in a responsible and effective manner. The District plans to develop water in an adaptive management approach and as the demand of water grows, will develop it in blocks and monitor the response of the system. The District recognizes and will honor existing water rights. Under Utah water law our priority date for Change Application Number a37400 is April 27, 2011 and we believe that we can develop water in the proposed ground water and surface water sources without impairing prior existing water rights.

In acting on change applications, the State Engineer follows the criteria in Utah Code Annotated, Sections 73-3-3 and 73-3-8. The statute provides the State Engineer must approve the application if there is unappropriated water available in the proposed sources, the change application will not impair existing water rights, the change application is physically and economically feasible, the change application is not detrimental to the public welfare, the applicant has the financial ability to complete the necessary works proposed, and the change application was not filed for speculation or monopoly[1]. If the State Engineer believes that, among other things, that the change application will "unreasonably affect public recreation or the natural stream environment, or will prove detrimental to the public welfare" the State Engineer may

[1] See Section 73-3-8(1)(a).

approve the application after he has investigated the matter[2]. The District hereby submits for consideration by the State Engineer the following data and information regarding the above cited criteria for Change Application Number a37400. The District will submit additional data and information at the State Engineer's administrative hearing.

UNAPPROPRIATED WATER IN THE PROPOSED SOURCE

Several protestants make the claim there is no unappropriated water in the proposed sources of water set forth under Change Application Number a37400 and the District has not provided with the application information to address this issue. The District submits the following information and will supplement it with additional information at the hearing.

Several studies have been conducted regarding the ground-water resources of Spanish Valley. While these are not comprehensive studies and there may still be some questions about the extent and nature of the ground-water system, the reports do provide some good data and information to evaluate the potential of the ground water as a possible source of supply. The report entitled *FINAL REPORT, Ground Water Availability in the Spanish Valley Aquifer Moab, Utah*[3] (Downs Report) shows the annual recharge to be about 17,300 acre-feet.

The estimates for recharge include about 3,300 acre-feet from seepage losses from Ken's Lake located in Section 6, T 27 S, R 23 E, SLB&M. There has been some question as to whether this figure represents long-term conditions[4]. The principle water right that covers the diversion, storage and use of water for Ken's Lake is Water Right Number 05-1523. While there are a number of issues regarding the water right that covers Ken's Lake and if changes might be made in the operation of the reservoir, these issues are beyond the purview of the District. Therefore, in the analysis of unappropriated water in the ground-water flow system in Spanish Valley, it is assumed that seepage from Ken's Lake is not available for appropriation and use.

In the Downs Report, the ground-water withdrawals in circa 2000 were estimated at 6,400 acre-feet per year. With the population growth and the approval of new applications to appropriate water it is believed current withdrawals in Spanish Valley have increased and are most likely about 7,000 acre-feet per year. These withdrawals are primarily used for irrigation, domestic purposes for individual homes and municipal purposes (Moab City and Grand Water and Sewer Service Agency (GWSSA)).

Based on a reconnaissance level review of the existing ground water rights and approved applications for ground water in Spanish Valley, it appears that they represent potentially about another 4,000 acre-feet per year of withdrawals. This number includes future approvals under Change Application a26150 (GWSSA), additional diversions under perfected water rights and potential withdrawals for approved application to appropriate water. If it is assumed that existing perfected and approved water rights

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[2] See Section 73-3-8(1)(b) and Bonham v. Morgan, 788 P.2d 497 (Utah 1989).

[3] FINAL REPORT Ground Water Availability in the Spanish Valley Aquifer Moab, Utah by Wayne Downs, PhD and Timothy Kovacs; Department of Civil and Environmental Engineering, Brigham Young University; Under contract with Horrocks Engineers, American Fork, Utah, Chris Hansen, Project Manager; August 28, 2001

[4] In the 2007 annual report for Grand Water & Sewer Service Agency it lists the estimated 2006 seepage from Ken's Lake as 864 acre-feet.

represent a potential withdrawal of about 11,000 acre-feet, and subtracting out the 3,300 acre-feet of recharge from Ken's Lake, this leaves possibly as much as 3,000 acre-feet of water available for appropriation. The above figures are based on several assumptions that are set forth in the planning documents for the project. Whether the entire 3,000 acre-feet is available at the points of diversions proposed under the Change Application Number a37400 is not known at this time and will be determined as the proposed wells are developed.

The preliminary master plan for the District service area designates 27 separate preliminary planned development areas (PDA) for mixed uses. See Attachment 1 for the location of the 27 PDAs. There are eight PDAs (PDAs 20 – 27) located in the Kane Springs area just outside of the Spanish Valley hydrologic basin, but still within the 05 Area. The Project wants to develop ground water to supply the needs of these PDAs. The ground-water resources in the Kane Springs area are not well defined; however, there appears to be some potential for ground-water development of reasonable quantities of water. Through future hydro-geologic studies, test well drilling and aquifer tests undertaken by the District in development of the wells proposed under this Change Application, it is believed that the parameters and character of the ground-water resources in this area will be better understood. Our review of geologic and pumping test data available from well logs on file with the Division of Water Rights (DWRi) indicate that there is reason to believe that there is ground water available to be developed in the Kane Spring area.

As development of the ground-water resources occur in both Spanish Valley and the Kane Springs area it is an opportunity to collect basic water resources data as test and production wells are drilled and aquifer tests done to determine the characteristics and parameters of the aquifers. The District is fully aware of the importance as the Project moves forward to invest some resources to collect basic data. If the Change Application is approved the District is committed to develop a ground-water monitoring program in coordination with the federal and state water management agencies. In reviewing available water level data for wells in these two areas, they do not show long-term water level declines.

The Colorado River, which is located at the north end of Spanish Valley, is proposed as a potential source of water under Change Application Number a37400. The Colorado River has sufficient flows to supply the Project water needs and there is clearly unappropriated water available. The flows as measured at U.S. Geological Survey (USGS) Colorado River at Cisco streamflow gaging station averages over 5.2 million acre-feet per year[5]. The lowest flow year of record occurred in 2002 and was over 1.8 million acre-feet. The potential impact of the proposed diversions from the Colorado River, even if it is assumed that all 5,000 acre-feet is diverted from the river, represent a very small percentage (less than .1 %) of the average annual flows in the river.

As stated in the Change Application the District preference in developing the water is first from ground-water sources in Spanish Valley, then ground water in the Kane Springs area and then the Colorado River. The Districts believes the hydrologic information available clearly shows there is reason to believe there is unappropriated water in the proposed sources to meet the requests under this Change Application.

[5] U.S.G.S. Gage Number 09180500. For water years 1914-17, 1923-2010 the average annual flow is 5,203,000 acre-feet per year. U.S.G.S. Water-Data Report 2010.

WILL NOT IMPAIR EXISTING WATER RIGHTS

The District is aware that Grand Water & Sewer Service Agency condition of approval for Change Application Number a26150 limited their diversion, but allow for consideration of an additional 1956 acre-feet as the Agency could demonstrate a need for the water. The District does not dispute this fact and has taken this into account in their evaluation of the quantity of unappropriated water available in Spanish Valley.

Several of the protestants stated that they are concerned about the potential impact that this application might have on the water resources of Spanish Valley, Kane Spring drainage and the Colorado River. As the District develops water they will do so in a responsible manner and will cooperate with the DWRi to ensure the safe yield of the ground-water system is not exceeded. The District is well aware and fully supports the water right priority system – first in time, first in right. If in the administration of withdrawals from the ground water in Spanish Valley the State Engineer had to cut water rights by priority, the District realizes that their Change Application has a priority date of April 27, 2011. The District acknowledges those water users who have prior water rights and will honor them as their project moves forward. The District is committed to be a good neighbor and insure that the resources are used within the parameters of safe yield and the integrity of the aquifer flow system is protected.

The District is aware of the many individual private well and spring water rights in area and believes that the development of the water under this Change Application will not impair those water rights. In reviewing the water rights of the protestants, there does not appear to be direct interference issues with those water rights that could be identified as being owned by the protestants. The greatest drawdown to an adjacent well is calculated to be less than 10 to 15 feet. In locating the proposed points of diversion in Spanish Valley and the Kane Springs area the District attempted to site them away from other existing wells and in locations believed to be favorable to providing adequate production rates.

Several protests identified PODs that are located outside of, and in some cases many tens of miles from the Spanish Valley and Kane Springs areas and from any of the proposed PODs. These include PODs identified in protests by The Nature Conservancy (05-585, 05-586, 05-614, 05-615, 05-616, 05-617) and U.S. Department of the Interior, Bureau of Land Management (BLM) (05-1101 and 05-94). These distant water rights would be unaffected by this Change Application.

Several protests expressed concern that the proposed wells would be completed in the valley fill or alluvial aquifer. Each of the 23 proposed wells is designed to target the Navajo Sandstone and/or underlying Wingate Sandstone of the Glen Canyon Group (GCG) bedrock aquifer. None of the proposed PODs target the unconsolidated valley fill or alluvial aquifer.

The location and depths of the proposed PODs (wells) were selected to produce the estimated demand of the nearby School and Institutional Trust Lands Administration (SITLA) PDAs while reducing and if possible, eliminating the potential for interference with existing ground-water PODs. The yield of the GCG aquifer is generally greater where fracture density and saturated thickness are greater. To increase potential yield, proposed wells were located, for the most part, (1) on or near geologic structures, such as folds and faults where the GCG aquifer is likely to be highly fractured and (2) in areas where the saturated thickness of the GCG aquifer is expected to be greater.

To reduce and, if possible eliminate the potential for interference, potential wells were located, where feasible, distant from, on the opposite side of mapped faults, and/or in different aquifers from existing ground-water PODs. Because drawdown for any pumping rate and/or pumping duration decreases with distance from the pumping well, each proposed POD was located as far as feasible from existing ground-water PODs.

Although fractures can increase ground-water flow near a fault, faults can also be barriers to ground-water flow where: (1) a fault offsets an aquifer against an aquitard, effectively severing the aquifer and/or (2) low-permeability gouge or breccia develops in the fault zone. Because faults can be barriers to ground-water flow, proposed wells were located, where feasible, on the opposite sides of mapped faults from existing underground PODs.

The GCG consist of, from youngest to oldest, the Navajo Sandstone, Kayenta Formation, and Wingate Sandstone. Most of the bedrock wells in Spanish Valley are completed in the Navajo Sandstone. In some areas, the Kayenta Formation contains sufficient low-permeability beds of shale and mudstone to be a confining layer or aquitard, creating hydraulic separation between the Navajo and Wingate sandstones. If information from ground-water exploration indicates that ground-water yield and quality of the Wingate Sandstone is adequate and that the hydraulic connection between the Wingate Sandstone and Navajo Sandstone is poor, then some wells may be completed exclusively in the Wingate Sandstone.

Only two wells may be needed in some areas, but three or more may be necessary in other areas to produce the desired yield while preventing impairment of existing water rights. As exploration wells are drilled and tested, some locations may be abandoned because they (1) do not provide the quantity or quality of water needed and/or (2) cause an unacceptable degree of interference with other water users. A total of 23 potential well locations are proposed to provide flexibility with the understanding that only a portion will be used for actual water supply wells.

The 23 proposed underground PODs (wells) are located in three general areas: (1) Spanish Valley near and north of Ken's Lake; (2) Spanish Valley south of Ken's Lake; and (3) Kane Springs.

Spanish Valley Area Near and North of Ken's Lake

There are seven (7) proposed PODs (1, 2, 3, 4, 10, 11, 12) located in Spanish Valley, north of Ken's Lake. The purpose of these proposed PODs are to provide water to SITLA PDAs 7, 8, and 9.

Several protests, including Moab City, Grand Water & Sewer Service Agency (GWSSA), The Nature Conservancy, the BLM, the Utah Division of Wildlife Resources (DWR), and several private individuals identified or have PODs that are located in Spanish Valley, near or north of Ken's Lake. Most of the protests expressed concern that the Change Application would interfere with and impair their water rights.

The estimated water supply demand of SITLA PDAs 7, 8, and 9 is 158 acre feet, which is equivalent to an average pumping rate of about 98 gpm. The shortest distance between a protestant's POD (Alan and Laura Margolies, Water Right Number 05-3101) and a proposed well (POD 1) is about 900 feet. We estimate that drawdown at even this short distance will be less than about 10 feet to produce the water needed for SITLA PDAs 7, 8, and 9. Ground-water exploration and testing will be used to (1) assess the degree of interference with the protestant wells and (2) select final well locations, designs, and pumping rates that will prevent impairment of the protestant wells.

Moab City expressed concern that the proposed PODs are located within the Sole Source Aquifer and Drinking Water Source Protection (DWSP) areas of their wells and springs (sources). The Moab Sole Source Aquifer is about 22 miles long and 9 miles wide, and covers about 119 square miles (76,000 acres). It provides water to their sources, including the DWSP areas of the Moab sources. All but two of the proposed PODs are located outside of the Moab Sole Source Aquifer area. Proposed PODs 14 and 15 are located within and near the southeastern limit of the Sole Source Aquifer area but are more than 5.3 miles to the southeast of the nearest Moab City water source.

Spanish Valley Area South of Ken's Lake

There are eight (8) proposed PODs (13 through 20) located in Spanish Valley south of Ken's Lake. The purpose of these proposed PODs are to provide water for SITLA PDAs 12 and 13. Each proposed POD is (1) designed to target the Navajo Sandstone and/or underlying Wingate Sandstone of the GCG aquifer, (2) located near mapped faults or folds to increase potential yield, (3) located relatively distant from and/or on the opposite side of mapped faults from existing wells to reduce or eliminate the potential for interference, and (4) to be located within a SITLA PDA.

The closest protestant is the BLM, which expressed concern for interference with their well located on the southwest side of Ken's Lake (Water Right Number 05-3067). Proposed POD 13 is located about 4,800 feet to the southeast of and on the opposite, downthrown side of a mapped east-to-west trending normal fault from the BLM well. The presence of the fault combined with the relatively long distance from the proposed PODs is expected to reduce or eliminate the potential for interference with the BLM well. Ground-water exploration and testing will be used to (1) assess the degree to which the fault and distance prevents interference with the BLM well and (2) select final well locations, designs, and pumping rates that will prevent impairment of the BLM well.

Kane Springs Area

There are eight (8) well locations (PODs 5 through 9, 21, 22, and 23) proposed for the Kane Springs area. The purpose of these PODS is to provide water for SITLA PDAs 20 through 27. Each proposed POD is (1) designed to target the Navajo Sandstone and/or underlying Wingate Sandstone of the GCG aquifer, (2) located near mapped faults to increase potential yield, (3) located relatively distant from and/or on the opposite side of mapped faults from existing wells to reduce or eliminate the potential for interference, and (4) to be located within a SITLA PDA.

In their protest, Bridger Jack Mesa Property Owners Association (Bridger Jack Mesa) expressed concern that the proposed PODs in the Kane Spring area will negatively impact and cause their wells to go dry. Proposed PODs 6 through 9 are located on the north, upthrown side of the northeast-trending series of high-angle normal faults which bound the northwest side of the Bridger Jack Mesa. Proposed PODs 21, 22, and 23 are located on the south, downthrown side of a northeast-trending series of high-angle normal faults that bound the southeast side of Bridger Jack Mesa. The presence of these faults is expected to reduce and/or eliminate the potential for interference with the Bridger Jack Mesa wells. Ground-water exploration and testing will be used to (1) assess the degree to which the faults prevent interference with the Bridger Jack Mesa wells and (2) select final well locations, designs, and pumping rates that will prevent impairment of the Bridger Jack Mesa wells.

Kane Springs discharge and many of the wells in the Bridger Jack Mesa area produce ground water from the Entrada aquifer. The Dewey Bridge Member of the Carmel Formation is a confining unit and separates the Entrada aquifer from the underlying GCG aquifer. Completion of the proposed PODs in the GCG aquifer is expected to reduce or prevent interference with Kane Springs and wells in the area that are completed in the Entrada aquifer. In addition, proposed PODs 21, 22, and 23 are the closest proposed wells to Kane Spring and all are located on the north, downthrown side of the northeast-trending high-angle normal fault from Kane Springs which further reduces the potential for interference. Ground-water exploration and testing will be used to (1) assess the degree to which interference with the Kane Springs is prevented by the presence of the fault and the Dewy Bridge Member confining layer and (2) select final well locations, designs, and pumping rates that will prevent impairment of Kane Springs.

PROJECT IS PHYSICALLY AND ECONOMICALLY FEASIBLE

Much of the land area that will be served by the water from District is held by SITLA. Thus, no lands are being acquired to make the development possible. Rather, the District will provide a reliable and dependable water supply so that SITLA is able to develop their lands for residential, commercial and other related purposes. Although the real estate market is down at this time, it is believed that by the time the initial sources of water are developed and the water distribution system constructed, the market will be substantially improved. The District has limited funding available at this time. However, itclearly has the institutional authorities in place to allow them to develop and supply water in an orderly and reliable manner.

The District has done significant work towards the master planning and development of the proposed project. Following are a list of studies completed to date directly related to this project.

- Trust Lands Administration Block Management Plan for the Spanish Valley Block, April 2007
- Task 1 Report, Well Siting Study / Groundwater Exploration Work Plan Spanish Valley Area, San Juan County, Utah for State of Utah School and Institutional Trust Lands Administration, Loughlin Water Associates, LLC, March 2010
- Task 4 Report, Water Right Review for the Proposed Development Project in Spanish Valley and Vicinity, San Juan County, Utah for the State of Utah School and Institutional Trust Lands Administration, Olds Engineering, PLLC, April 2010.
- SITLA – Spanish Valley Water System Master Plan, Horrocks Engineers, May 5, 2010

THE DISTRICT HAS FINANCIAL ABILITY TO COMPLETE THE PROPOSED WORKS

The San Juan County Commission in creating the District has identified a need to provide safe, clean and reliable water in the District service boundaries. The Commission has provided start up funds for the District to obtain the necessary water rights and file the required water right applications to meet their

needs. As the District grows they have the ability to bond, charge fees and assess the land owners served by the District. The assets of the District are limited at this time, however, the approach that the board is taking is a conservative and prudent one that will insure success and financial stability. Clearly, the District has the financial ability over time to complete the diversion works and distribution system proposed under their change application, and to place the water to beneficial use.

APPLICATION FILED IN GOOD FAITH, NOT FOR SPECULATION OR MONOPOLY

We believe the District has followed the laws and regulations of the State of Utah in acquiring the water to meet their reasonable future needs and have filed the necessary water right applications to convey ownership of such water to the District. Upon acquiring the water, they have then filed this Change Application in compliance with the State Engineer's policy in the Upper Colorado River Basin regarding the developing of water for new projects.

The District is a long-term water user in the area and will be actively involved in the wise management, protection and use of the valuable and limited water resources in this area. The District and SITLA have performed the necessary master planning for the development to clearly demonstrate it is a viable project and the Change Application is not filed for speculation or monopoly.

PUBLIC WELFARE, RECREATION AND THE NATURAL STREAM ENVIRONMENT

The District was created by the San Juan County Commission to develop and provide a clean and reliable supply of municipal water to San Juan County's portion of Spanish Valley and adjoining areas. This water will serve the water needs of the public within the service area of the District in an effective and efficient manner. We point out to the State Engineer that the District is a governmental entity and qualifies as a public water supplier as defined by statute. We believe these facts alone show that the Change Application filed by the District is in the public interest and will not prove detrimental to the public welfare.

The District has a board of directors that guide and direct its actions. The board is accountable to the citizens they serve and must comply with the laws and regulations that govern service districts. By creating the District to develop a public water system to serve the area, there is a strong argument that it will result in better water resource management and protection, as opposed to individual wells. The development of numerous individual wells to supply water to an area presents water rights administration, water quality protection, and public health challenges. The public water supply system to be constructed by the District will comply with all local, state and federal laws applicable to such a water system. The District will become an active and responsible steward in the management and protection of the water resources of the area.

The District will obtain the permits, rights-of-way, and other required approvals before constructing and diverting water from the Colorado River. The District will work with the State Engineer, Army Corps of Engineers and the Upper Colorado River Endangered Fishes Recovery Program in the placement and design of the intake screens to insure that endangered fish species in the river are not adversely affected and they are not a hazard to rafters and boaters. Even if all of the water is diverted from the Colorado River the hydrology affect is very, very small and could not be measured. It is believed that this Change Application will not be detrimental to the natural stream environment or public recreation.

OTHER ISSUES

Several protestants commented about climate change and concerns regarding future water supplies. The priority system that Utah's water right system is founded on is very capable of addressing problems due to prolonged drought or potential diminished supplies from possible climate change. The District supports the prior appropriation system and will work within that system to develop and supply their water needs.

The Change Application filed by the District does not represent a new appropriation of water in the Upper Colorado River Basin of Utah, as stated by several protestants. The water covered by Change Application Number a37400 (09-2349) is a segregated portion of approved Application to Appropriate Water, Number A37788 (Water Right Number 09-438) held by the San Juan County Water Conservancy District. By agreement this water was conveyed to the Special Service District for the expressed purpose of providing water to meet future water demands within the boundaries of the District.

As the lands within the District are developed the issues related to disposal of sewage effluent and other similar issues will be dealt with in a proactive and responsible manner to protect public health. The District will comply with the regulations and laws that govern them as a public water supplier.

As part of the requirements of a public water supply system, they are required to provide adequate storage to provide for peak demand and fire flows. The District will construct storage reservoir, most likely enclosed concrete or steel tanks, to meet these requirements.

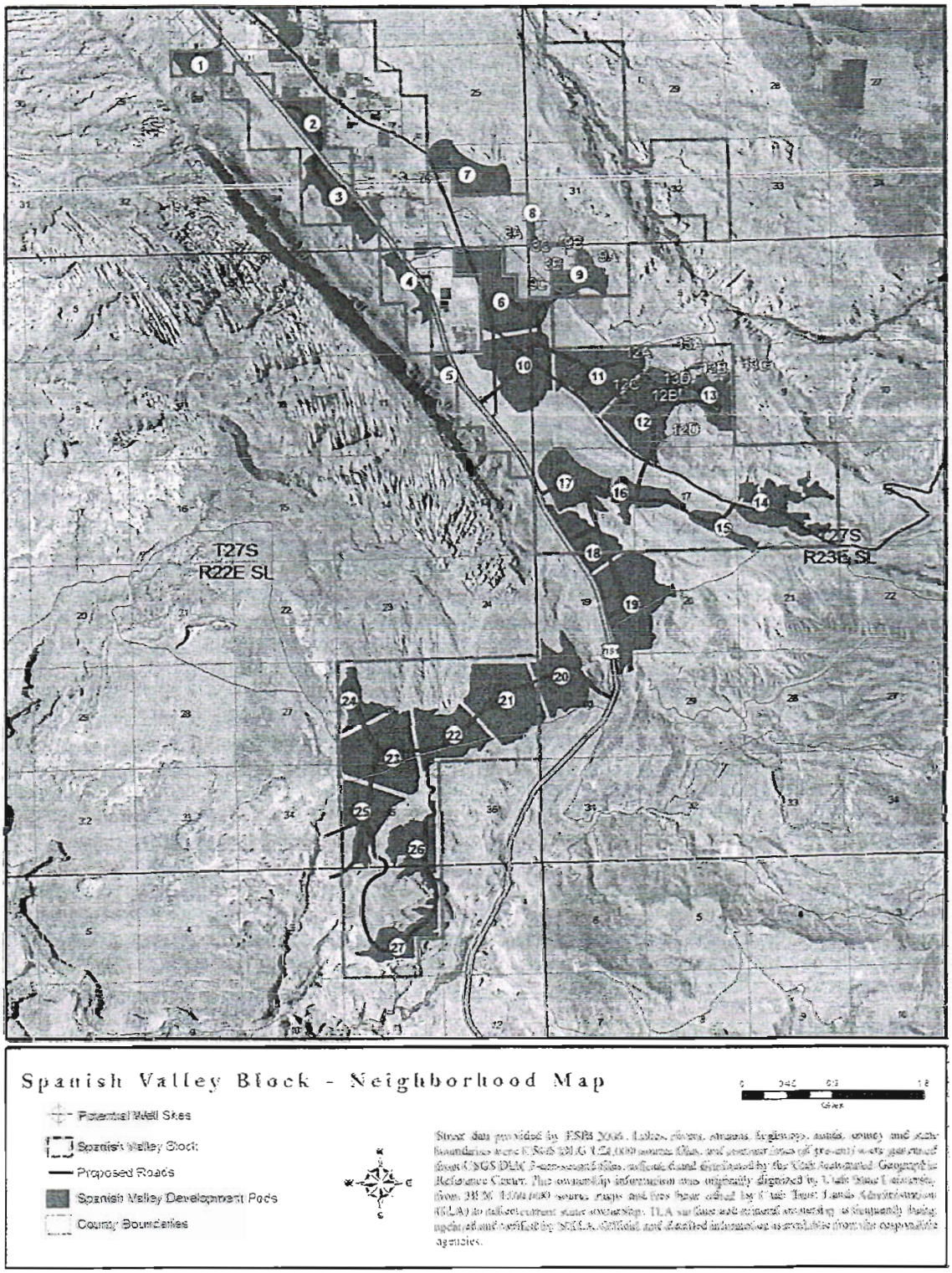
As the wells are drilled, tested and developed as proposed under this Change Application, it will result in additional data regarding the characteristics and nature of the ground-water flow system. The District will cooperate with the State Engineer and provide the data and information that is collected during this phase of the project. Going forward the District also believes it is important to monitor the system to ensure that the long-term safe yield is not exceeded. The District will make their wells available for monitoring purposes and will submit the annual ground-water withdrawals and water level data to DWRi under the Water Use Program. The District believes that Change Application Number a37400 was filed in compliance with the water law statutes of the State of Utah and is in accordance with the State Engineer's Memorandum of Water Appropriation Policy, Colorado River Drainage, Revised February 25, 2009.

Therefore, the San Juan Spanish Valley Special Service District respectfully requests the State Engineer to approve Change Application Number a37400. Thank you for your consideration and please let me know if you have questions or if we can provide additional information.

Sincerely,

William H. Johnston, Chairman

Enclosure: Attachment 1



Attachment 1 – Location of Planned Development Areas (PDAs)