

AFTER FOURTEEN YEARS
REQUEST FOR EXTENSION OF TIME TO FILE PROOF OF BENEFICIAL USE
STATE OF UTAH Fee Amount: \$150

WATER RIGHT NO. **89-1285 (A35818a)**
APPLICANT: **Kane County Water Conservancy District**
190 West Center Street
Suite 200
Kanab UT 84741

Provide all information requested below:
Construction completed to date:
SEE ATTACHMENT

Work completed since last extension:
SEE ATTACHMENT

Reasons why the project has not been completed:
SEE ATTACHMENT

Estimated time for completion of project:
SEE ATTACHMENT

Pursuant to Section 73-3-12, Utah Code Annotated 1953 (as amended), request is made for EXTENSION OF TIME to file proof of beneficial use. I assert that to the best of my knowledge all information provided herein is true and complete. By signing this form, I assert that I am the applicant or I have been granted authority to make this request on behalf of the applicant.

Michael E. Noel 8/24/2015 435-644-3997
APPLICANT or REPRESENTATIVE (signature) Date Telephone Number (Optional)

Michael E. Noel Executive Director
APPLICANT or REPRESENTATIVE (print) REPRESENTATIVE'S TITLE

FOR OFFICE USE ONLY

\$150 FEE REC'D. ✓ 16086 BY gk RECEIPT NO. 15-03205 COMPUTER _____

PROOF DUE DATE: **September 30, 2015** 14 YEAR PERIOD ENDED: **September 3, 1979**
50 YEAR PERIOD ENDS: **September 3, 2015**

REMARKS:

Return to: DIVISION OF WATER RIGHTS*1594 West North Temple, Suite 220, Salt Lake City, UT 84116*(801)538-7240

RECEIVED
SEP 03 2015
WATER RIGHTS
SALT LAKE

ATTACHMENT A

After Fourteen Years and Fifty Years Request for Extension of Time to File Proof of Beneficial Use

Application Number A35818
Water Right Numbers 89-74, 89-1285 and 89-1513 held by
Kane County Water Conservancy District
September 2015

INTRODUCTION

The Kane County Water Conservancy District (“District”) requests additional time to place the water to beneficial use under Application Number A35818, Water Right Numbers 89-74, 89-1285 and 89-1513 (“Water Rights”). The District is a public water supplier under state law and hereby demonstrates reasonable and due diligence and the need for the water to meet the reasonable future water requirements of the public in the next 40 years.

The Application was originally approved for the Kaiparowits power project and the development of coal resources. Later, the coal power project was abandoned after the lands were included as part of the 1996 Grand Staircase-Escalante National Monument.

The District acquired the Water Rights in 2003 from AMCA Coal Leasing, Incorporated for the purpose of placing the water to beneficial use for the benefit of the citizens of Kane County, the region and the State of Utah.

The District prepared a 40 Year Water Use Plan (“Plan”) as required by Section 73-3-12 for an extension of time beyond 50 years. The plan is attached as ATTACHMENT B and made a part of this extension request.

Among items the District is doing to develop the water as set forth in the Plan is working with Blue Castle Holdings for the development of a nuclear power plant. The Water Rights are leased to Blue Castle Holdings, Inc. and were approved by the State Engineer for use at the Blue Castle Project near Green River, Utah. The Plan further identifies the municipal, agricultural, industrial, power and other water needs of the public for the next 40 years.

The priority date of Application A35818 is January 15, 1964 and is important as the State of Utah reaches full development of its Upper Colorado River entitlement. It is in

the best interest of the State of Utah to see that its water resources are utilized for the benefit of its citizens.

The District is a public water supplier and has demonstrated that the water under the Water Rights is needed for the reasonable future requirements of the public in the next 40 years. The District has met and complied with all the requirements necessary for approval of the extension request beyond 50 years and respectfully requests that the extension requests be approved.

WORK COMPLETED SINCE LAST EXTENSION

Change application a35402 was filed on the water rights for the Blue Castle Project in 2010 and approved in 2012 by the state engineer. Some protestants then sought judicial review with the district court. The district court affirmed the decision of the state engineer and approved all necessary change applications for the Project. The district court's ruling is now pending before the Utah Court of Appeals.

In August 2014, Blue Castle Holdings entered into a Memorandum of Understanding or MOU with Westinghouse Electric Company LLC to pursue the development of a two-unit AP1000 nuclear power plant. Under the agreement, the companies will work together to develop a scope of activities including marketing, nuclear safety licensing, permitting, design, engineering, procurement, construction, installation, commissioning, startup, testing, nuclear fuel, refueling, operation and maintenance of the two-unit plant.

The total direct dollar project investment to date: >\$19 Million

Blue Castle Project Status – 2008 to Present

1. Early Site Permit Application (% complete)
 - a. Meteorology (75%)
Meteorological Tower operational w/two (2) years of data obtained
 - b. Geology (70%)
Core Borings (ten (10) totaling ~one (1) mile) completed with lab analysis in process
 - c. Hydrology (20%)
On-site Groundwater monitoring wells installed w/surface water and groundwater sampling completed, sample analysis, groundwater gauging event completed, packer testing (hydraulic conductivity) performed and data evaluated
 - d. Senior Seismic Hazard Analysis Committee (“SSHAC”) (50%)
Seismic Analysis using comprehensive SSHAC Level 3 process

- e. Seismic (25%)
Seismic monitoring station installed October 2013 w/one (1) year of data obtained
 - f. Geography (60%)
Socioeconomic and demography of 50-mile region data collection completed
 - g. Alternate Site Analysis (50%)
Land use survey completed
 - h. Emergency Plan (45%)
Emergency Planning data collection in process w/evacuation time estimate project completed – all key state and local Emergency Preparedness (“EP”) agencies engaged
2. Nuclear Regulatory Commission (“NRC”) Involved in Blue Castle Project Pre-Application Process
- a. NRC has issued data collection letter citing adequate process
 - b. NRC participation in SSHAC Level 3 process
 - c. Multiple NRC visits to Blue Castle Project

REASONS WHY THE PROJECT HAS NOT BEEN COMPLETED

The approved change applications for the water rights necessary for the Blue Castle Project were appealed and are in litigation.

In addition, the standard time frame in the industry for the licensure and construction of a nuclear power plant is 10 to 15 years.

ESTIMATED TIME FOR COMPLETION OF PROJECTS

Water under these Water Rights will be placed to beneficial use at the Blue Castle Project as development occurs. In the meantime, these portions of the water rights segregated from Application A35818 will continue to be held by the Kane County Water Conservancy District as a public water supplier and are needed to meet the future reasonable water demands of the public over the next 40 years. Under the lease agreement between Blue Castle Holdings and the District, the District also is allowed to use the water in the interim until it is needed for the plant. Development of the Blue Castle Project will continue to proceed by conducting work on the Early Site Permit Application with the Nuclear Regulatory Commission. As a leaseholder of the Water Rights, Blue Castle will continue to seek development of a two-unit nuclear power plant through marketing, nuclear safety licensing, permitting, design, engineering, procurement, construction, installation, commissioning, startup, testing, nuclear fuel, refueling, operation and maintenance.

ATTACHMENT B

Kane County Water Conservancy District
40-Year Water Use Plan

Submitted in support of the
Extension of Time Request
for
Water Right Numbers 89-74, 89-1285,
89-1498, 89-1513 & 89-1626
Application to Appropriate Water Number A35818

September 2015

TABLE OF CONTENTS

	<u>Page Number</u>
1.0 - Introduction	1
2.0 - Future Water Requirements of the District.....	3
2.1- Municipal Water Demands	3
2.2- Lake Powell Pipeline	5
2.3- Industrial Water Demands	6
2.4- Blue Castle Power Plant	7
2.5- Big Water Block	8
2.6 - Agriculture Development.....	9
3.0. Summary	10

1.0 - INTRODUCTION

The Kane County Water Conservancy District (District) was organized in 1992¹ for the purpose of conserving and developing water for multiple uses including municipal, agriculture, industrial, commercial, wildlife and stock watering to benefit the citizens of Kane County, as provided under the Water Conservancy District Act. The Resources Company of Phoenix, Arizona filed Application to Appropriate Water, Number A35818, Water Right Number 89-74 (WR 89-74) with the Utah State Engineer on January 15, 1964 and it was approved on September 3, 1965. WR 89-74 and segregated portions covered by WRs 89-1285 and 89-1513 were assigned to the District on November 25, 2003.² The segregated portion covered by WRs 89-1498 and 89-1626 was conveyed by AMCA Coal Leasing to the State of Utah, School and Institutional Trust Lands Administration (SITLA) in December 2002³. SITLA then conveyed the water to the District in August 2008⁴. With the original application being approved on September 3, 1965 it is near the end of the 50-year period, which is addressed in statute and discussed below.

Section 73-3-13, Utah Code sets forth the criteria the State Engineer must follow in granting extension of time beyond 50 years. Subsection (b) (i) states:

The state engineer may extend the time in which the applicant shall comply with Subsection (2)(a) by setting a date after 50 years from the day on which the application is approved if the applicant:

(A) is:

(I) **a public water supplier; or**

(II) **a wholesale electrical cooperative; and**

¹ See www.kcwcd.com

² See Report of Conveyance from AMCA Coal Leasing, Incorporated to Kane County Water Conservancy District on Water Right Number 89-74.

³ See Request for Extension of Time to File Proof of Beneficial Use, WR 89-1498, dated November 25, 2003.

⁴ See title documents on file for WR 89-1498.

(B) provides information that shows the water applied for in the application is needed to meet the reasonable future requirements of the public.

(ii) The information provided by a public water supplier shall be in accordance with the criteria listed in **Subsection 73-1-4(2)(f)**. (emphasis added)

Section 73-1-4(2)(f) contains the language that addresses the reasonable future water requirements of the public and it states:

(i) The reasonable future water requirement of the public is **the amount of water needed in the next 40 years by:**

(A) the persons within the public water supplier's reasonably anticipated service area based on reasonably anticipated population growth; or

(B) other water use demand. (emphasis added)

The purpose of this document is to set forth the 40-Year Water Use Plan (Plan) for the District within their reasonably anticipated service area and to project the reasonable future water use requirements for municipal and other water use demands under the water rights. The District is a public water supplier as defined by statute and needs the water available under WRs 89-74, 89-1285, 89-1498, 89-1513 and 89-1626⁵ (Water Right) to meet their reasonable future water requirements. The District is authorized to lease or sell water both within and outside the boundaries of the District. The District is committed to developing its water to meet the projected future demands for water and to promote water conservation and development, the greatest beneficial use of water, and the greater prosperity and general welfare of the people of the state.⁶ The District is working with other entities to place water under the Water Right to beneficial use and as such it will provide direct benefits to the citizens of Kane County, the region and the State of Utah. There is an agreement in place between the District and Blue Castle

⁵ WRs 89-1285 and 89-1513 are segregations from WR 89-74. WR 89-1498 is a segregation from 89-1285. WR 89-1626 was segregated from WR 89-1498.

⁶ Purposes of Water Conservancy Districts, Section 17B-2a-1002, U.C.A.

Holdings for the water under WRs 89-74, 89-1285 and 89-1513 to be used for steam power generation at the Blue Castle Nuclear Power Plant near Green River, Utah. An agreement is also in place for the District's WRs 89-1498 and 89-1626 to be used on SITLA lands near Lake Powell. Considerable effort and expense has already been made regarding these two projects and they are discussed later in this Plan.

2.0 - FUTURE WATER REQUIREMENTS OF THE DISTRICT

2.1 - MUNICIPAL WATER DEMANDS

The District has the responsibility to assist the public water suppliers of Kane County in obtaining and supplying water to their residents. In addition, the District delivers water directly to retail customers in the county. In Kane County there are thirteen public water supply systems identified in the Utah Division of Water Rights, Water Use Program database and they are shown in the following table along with their respective population served as reported to the Water Use Program.

The 2014 population of Kane County is estimated at 7,250⁷. The population projections for Kane County for the 40-year period 2015 to 2055 show a projected population of 16,950 or an increase of 9,210 people⁸. The average family size for Kane County in 2055 is expected to be about 2.67 people per family⁹. Using this data the increased population would result in about 3,450 new families in Kane County. The water right diversion for each family is calculated to be about 3.20 acre-feet and a depletion of 1.60 acre-feet per family¹⁰. Based on these assumptions the municipal water requirement for the 40-year period for the population increase would be about **11,000 acre-feet**.

⁷ <http://quickfacts.census.gov/qfd/states/49/49025.html>

⁸ Source: Governor's Office of Planning and Budget (GOPB), 2012 Baseline Population Projections.

⁹ GOPB, 2012 Baseline Projections, Households by Area.

¹⁰ The following assumptions were made in calculating these figures. 1) Each family would divert 0.45 acre-feet per year for in-house uses and deplete about 20% of that water, or 0.09 acre-feet; 2) There will be 0.50 acre of irrigation per family at a diversion allowance of 4.50 acre-feet per acre (average for Area 85 and 89) and a depletion of 2.52 acre-feet per acre (average depletion for the Kanab and Orderville

Table of Public Water Suppliers in Kane County

Public Water Supplier	Population Served
Alton Town Water	119
Church Wells Special Service District	200
Clark Bench Water Company	22
East Zion Special Service District	50
Glen Canyon City SSD (Big Water)	486
Glendale Town	388
Grand Staircase Water Company	200
Kanab City	4,312
Kane County WCD ¹¹	3,000
Lion's Head Property Owner's Association	36
National Park Service - Bullfrog	350
National Park Service – Dangling Rope	25
Orderville Town	577

Since the water use is municipal and full depletion is allowable under the subject water rights, it is assumed that the municipal water use will be fully consumptive. The District realizes that the existing municipal systems have some excess capacity to supply limited growth. However, data to take this factor into account are not available. By agreement, water under WRs 89-1498 and 89-1626 will be used to supply municipal water to the Big Water Block held by SITLA and is discussed later in this Plan.

Lake Powell National Recreational Area, Grand Staircase National Monument, Coral Pink Sand Dune State Park, Kodachrome Basin State Park, a large block of the Dixie National Forest and several recreational areas are located in Kane County. Although the District may not have an obligation to supply water to these government facilities, the tourism associated with these management areas has an influence on the water

stations); and 3) Commercial, industrial and institutional uses to support each family of 0.50 acre-feet of diversion and 0.25 acre-feet of depletion.

¹¹ The District provides water to several communities in the county and the water deliveries help supplement the sources held by the communities. Thus, the population figure for the District is not how many people that are supplied water as a sole supply.

demands of the local communities that provide services to the tourism industry. Kane County provides significant services to the tourists visiting Grand Canyon National Park, Zion National Park and Bryce Canyon National Park. Currently, there are 842 hotel rooms in the county and 155 new hotel rooms are currently under construction in Kanab. It is estimated at present about 440,000 tourists stay in Kane County every year¹². Tourism is expected to grow significantly over the next 40 years and while detailed estimates are not available, the District believes that **1,000 acre-feet** should be committed to provide for the water demands associated with tourism.

Another unique water demand issue in Kane County is the large number of recreational properties (second homes and rental properties) located primarily in the East Zion area and on Cedar Mountain. These homes are not counted in the census data and are not factored into the population projections presented above for Kane County. Nevertheless, the total water use demand for these recreational properties is significant. Available data indicate that presently about 2,000 second homes and recreational rental units exist in the county¹³. This figure will certainly increase during the next 40 years. To insure reasonable water supplies are available the District is plan for **2,000 acre-feet** annually for second homes and recreational units. The District will most likely be the entity that will supply most of this water.

*** Increased Municipal Water Demands by 2055 **14,000 acre-feet**

2.2. – LAKE POWELL PIPELINE

The Utah Board of Water Resources, under the Lake Powell Pipeline (LPP) Development Act passed by the Utah State Legislature in 2006, is authorized to build the Lake Powell Pipeline to meet the water demands of southwestern Utah. The legislation authorizes a pipeline to take water from Lake Powell, and transport it to

¹² Draft data provided by the Kane County Office of Tourism. Section 1.1, Overview of Kane County Water System.

¹³ See footnote above.

Washington and Kane counties. The District is working with the Utah Division of Water Resources and the Washington County Water Conservancy District (WCWCD) on the proposed Lake Powell Pipeline project. Water from the LPP will be used to supply water for the future municipal water demand in the two counties.

The project consists of approximately 139 miles buried of 69-inch pipe from Lake Powell to Sand Hollow Reservoir near Hurricane. It also includes pumping facilities near Glen Canyon Dam with booster pumping stations along the pipeline alignment to provide the approximately 2,000 foot lift needed to carry the water over the high point in the pipeline. Hydroelectric generation facilities will be included to utilize the roughly 2,900 foot drop between the high point and the end of the pipeline. Power sales will be used to help offset pumping costs.

At full development the pipeline is expected to annually deliver up to 82,000 acre-feet to Washington County Water Conservancy District and **4,000 acre-feet of depletion to the District**. The water diverted into the pipeline for the District will be provided under other water rights. This water will be used primarily for municipal purposes and will be used to meet some of the future population growth in the county as discussed in Section 2.1.

2.3 - INDUSTRIAL WATER DEMANDS

Kane County encourages industrial development and believes they need to commit some water to supply these types of needs. The industrial development would most likely be light manufacturing, mining, mineral extraction and sand & gravel operations, along with their related water uses. Kane County has potential for coal development in several areas of the county¹⁴. The Utah Geological Survey (UGS) has identified other

¹⁴ Coal Resources Map of Utah, 2006, by David Tabet and Sharon Wakefield. Map 226 DM, Utah Geological Survey.

potential mining areas in the County¹⁵. The District has committed a total of **8,000 acre-feet** of water to meet these potential uses. It is assumed that these water uses will be totally consumptive.

*** Estimated Industrial Water Demand **8,000 acre-feet**

2.4 – BLUE CASTLE POWER PLANT

The District has entered into an agreement with Blue Castle Holdings to lease them **29,600 acre-feet** of water under WRs 89-74, 89-1285 and 89-1513 to supply water to the proposed nuclear power plant about 5 miles northwest of Green River, Utah. The District filed Change Application Number a35402 on March 30, 2009 to transfer water under the subject water rights to the Green River for use at the plant. The change application was approved by the State Engineer on January 20, 2012. The protestants filed for judicial review of the Order of the State Engineer and the order was upheld by the District Court. The decision of the District Court was appealed and the District and others are working through the legal process to finalize the Order of the State Engineer.

Under Change a35402 the water is proposed to be diverted from the Green River near the town of Green River, Utah. The water will be conveyed to the plant site and stored year-round in a reservoir having a capacity of 2,000 acre-feet. The water will be used to supply about 55% of the total water requirement for the Blue Castle power plant¹⁶.

Under the lease agreement between Blue Castle Holdings and the District, the District is allowed to use the water in the interim until it is needed for the plant.

*** Power Plant Water Use **29,600 acre-feet**

¹⁵ Map 70, Utah Mining District Areas and Principle Metal Occurrences. August 1983 by Hellmut H. Doelling and Edwin W. Tooker, Utah Geological Survey and US Geological Survey, respectively.

¹⁶ The total water demand for the Blue Castle Nuclear Power Plant is 53,600 acre-feet, with 29,600 acre-feet supplied under WRs 89-74, 89-1285 and 89-1513. The remaining water is supplied under Change Application Number 09-462 (a35874).

2.5 – BIG WATER BLOCK

SITLA's Big Water Block is comprised of over 50,000 acres and is located west of Lake Powell and near the Utah-Arizona state line. The majority of the Big Water Block was acquired by the State of Utah in 1999 in connection with the large state-federal land exchange that followed designation of the Grand Staircase-Escalante National Monument. SITLA identified the lands of the Big Water Block as having significant potential for future residential, resort, commercial and agricultural development in light of its proximity to Lake Powell, Page Arizona and its favorable desert climate.

In order to develop the Big Water Block, SITLA will need significant quantities of water. The District and SITLA reached an agreement for the transfer of WRs 89-1498 and 89-1626 to the District in exchange for providing future water service to the Big Water Block. This agreement also provides for the potential assignment of all or portions of the two applications to Glen Canyon Special Service District or the Town of Big Water if those entities can more effectively deliver water to particular lands in the block. WRs 89-1498 and 89-1626 are for a combined quantity of 400 acre-feet.

Initial planning is underway for small scale residential development, a possible resort on the eastern edge of the property and a solar farm to generate electricity combined with a possible hydro-electric pump-back storage project. In order for SITLA to realize the full potential benefits to the public school trust fund from the Big Water Block they will need substantially more water than the 400 acre-feet. For purposes of this Plan it is assumed that **5,000 acre-feet** is needed for the residential, resort, commercial and industrial components of developing the Block and the District could assist with providing such water.

***** Estimated Water Use for the Big Water Block..... 5,000 acre-feet**

2.6 - AGRICULTURE DEVELOPMENT

Agriculture is an important sector in the overall economy of Kane County. The total irrigated cropland in the county is about 7,600 acres with alfalfa, grass hay and pasture accounting for about 70 percent of the acreage.¹⁷

There is substantial acreage within the Big Water Block that appears to be arable. The District and SITLA has not conducted detailed studies of these lands, but plans to examine the development potential of these lands over the next several years. Water would most likely be developed from groundwater which is recharged from Lake Powell. If large capacity wells (greater than 1.0 cfs) could be developed, agricultural development appears to be viable. It is estimated as much as 2,500 acres are suitable for irrigation. The District and SITLA wants to explore the possibility of growing high value crops for shipment to markets in Salt Lake, Las Vegas, Denver and Phoenix.

Development of this irrigated acreage would use efficient irrigation practices and the actual diversion requirement would most likely be about 4.00 acre-feet per acre. Based on these assumptions the Big Water Block Agricultural Project would require a water supply of about **10,000 acre-feet** annually.

The District has also identified about 4,000 acres of agricultural lands located east of Kanab along Highway 89 to about the Petrified Hollow Road, hereafter referred to as the East Kanab Agricultural Project. These lands are generally sandy soils that would be classified as irrigable if water is available. Early planning efforts have proposed specialty crops be grown and the produce would be sold locally and also transported to the large metropolitan markets in the region. If the East Kanab Agricultural Project is viable, the development of greenhouse crops would also be evaluated. Water would most likely also be supplied through the LPP. The irrigation duty in the Kanab Creek drainage is 5.00 acre-feet per acre. Thus, this project could use up to **20,000 acre-feet**.

¹⁷ Utah State Water Plan, West Colorado River Basin, Table 10-1, page 10-3.

Big Water Agricultural Project..... 10,000 acre-feet
 East Kanab Agricultural Project..... 20,000 acre-feet
***** Total Agriculture Water Use 30,000 acre-feet**

3.0 – SUMMARY

The District's 40-Year Water Use Plan identifies a number of potential projects for which the water appropriated under WRs 89-74, 89-1285, 89-1498, 89-1513 and 89-1626 will be required by the public and beneficially used. Following is a listing of the projects set forth in the District's Plan along with the diversion/depletion requirement associated with each project.

<u>Water Use or Project</u>	Units: Acre-Feet <u>Diversion/Depletion</u>
Municipal Water Demand	14,000
Industrial & Mining Water Demand	8,000
Blue Castle Power Plant	29,600
Big Water Block	5,000
<u>Agriculture Development</u>	<u>30,000</u>
Total	86,600

The potential projects water demands exceed the amount of water available under the Water Right. The District is committed to provide water for the Blue Castle Project for the duration of the agreement. The projected life of the plant is at least forty years. After the life of the power plant is met, the water could be used to develop the other projects identified above.

Development of each project listed above will utilize the Water Right to meet the future water requirements of the public, result in direct benefits to the District, and provide

significant benefits to the local, regional and state economy. The District will continue to evaluate the projects and select those that are the most beneficial and cost effective.

Over the past several years SITLA has assisted with construction of infrastructure upgrades related to the water system operated by Glen Canyon Special Service District near the Big Water Block. These upgrades are expected to enhance opportunities for development on the SITLA property. The water held by the District is very important to meeting the reasonably anticipated future water demands of the Big Water Block.

The District is a public water supplier as defined by statute. The District has fulfilled all requirements provided for under existing statutes to be granted an extension of time beyond 50 years by demonstrating that the water is needed to meet the reasonable future water requirements of the public in the next 40 years. The District respectfully requests that the State Engineer grant an extension of time for WRs 89-74, 89-1285, 89-1498, 89-1513, and 89-1626.