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JOSHUA BASIN WATER DISTRICT  
REGULAR MEETING OF THE CITIZENS ADVISORY COMMITTEE  
TUESDAY, SEPTEMBER 20, 2016 7:00 PM  
61750 CHOLLITA ROAD, JOSHUA TREE, CA 92252

AGENDA

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. DETERMINATION OF QUORUM
4. APPROVAL OF AGENDA
5. PUBLIC COMMENTS:  
This public comment portion of this agenda provides an opportunity for the public to address the Committee on items not listed on the agenda that *are of interest to the public at large* and are within the subject matter jurisdiction of this Committee. The Committee is prohibited by law from taking action on matters discussed that are not on the agenda, and no adverse conclusions should be drawn if the Board does not respond to public comments at this time.
6. CONSENT CALENDAR
  - A. Approve Minutes of the May 10, 2016 Regular Meeting of the Citizens Advisory Committee
7. ELECT A VICE CHAIR TO THE COMMITTEE
8. UPDATE ON CHROMIUM 6 COMPLIANCE PLAN
9. PREPARING FOR COSTS OF CHROMIUM 6 AND CAPITAL IMPROVEMENT PLAN
10. COMMITTEE MEMBER COMMENTS/REPORTS
11. GENERAL MANAGER REPORT
12. CONFIRM DATE FOR NEXT CITIZENS ADVISORY COMMITTEE MEETING
  - Next meeting is scheduled for Tuesday, November 15, 2016 at 7:00 p.m.
13. ADJOURNMENT

Pages 2-3

Pages 4-28

Pages 29-34

**INFORMATION:** During "Public Comment", please use the podium microphone. State your name and have your information prepared and be ready to provide your comments to the Committee. The District is interested and appreciates your comments. A 3-minute time limit will be imposed. Thank you. Any person with a disability who requires accommodation in order to participate in this meeting should telephone Joshua Basin Water District at (760) 366-8438, at least 48 hours prior to the meeting to make a request for a disability-related accommodation.

Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for public inspection in the District's office located at 61750 Chollita Road, Joshua Tree, California 92252 during normal business hours.

**JOSHUA BASIN WATER DISTRICT**  
**Minutes of the**  
**REGULAR MEETING**  
**OF THE CITIZENS ADVISORY COMMITTEE**  
**May 10, 2016**

**1. CALL TO ORDER 7:00 PM**

**2. PLEDGE OF ALLEGIANCE**

**3. DETERMINATION OF QUORUM:**

Amy Fauls	Absent
Thomas Floen	Present
Shari Long	Present
Karen Morton	Present
Luke Sabala	Absent
Karyn Sernka	Absent
Karen Tracy	Present

**STAFF PRESENT:** Curt Sauer, General Manager

**GUESTS:** Constance Walsh

**4. APPROVAL OF AGENDA**

**MSC Floen/Long 4/0 to approve the agenda for the May 10, 2016 Regular Meeting of the Citizens Advisory Committee.**

Amy Fauls	Absent
Thomas Floen	Aye
Shari Long	Aye
Karen Morton	Aye
Luke Sabala	Absent
Karyn Sernka	Absent
Karen Tracy	Aye

**5. PUBLIC COMMENT - None**

**6. CONSENT CALENDAR –**

A. Approve Minutes of March 8, 2016 Regular Meeting of the Citizens Advisory Committee.

**MSC/Tracy/Long 4/0 to Approve the March 8, 2016 Regular Meeting of the Citizens Advisory Committee Minutes**

Amy Fauls	Aye
Thomas Floen	Aye
Shari Long	Aye
Karen Morton	Aye
Luke Sabala	Aye
Karyn Sernka	Aye
Karen Tracy	Aye

**7. DISCUSSION – DRAFT URBAN WATER MANAGEMENT PLAN**

GM Sauer gave an update on the Urban Water Management Plan and informed the Committee that it can be viewed online between May and June. The Urban Water Management Plan will need to be filed with the State by June 30, 2016.

**8. GENERAL OVERVIEW FOR 2016-2017 AND 2017-2018 BUDGET**

GM Sauer gave a brief overview of the 2016/2017 and 2017/2018 Budget.

**9. GENERAL MANAGER REPORT**

GM Sauer gave an overview of the Drought Executive Order.

**10. COMMITTEE MEMBER COMMENTS/REPORTS**

Agenda item for the next meeting - Appoint/Elect a Vice Chair to the Committee.

**11. CONFIRM DATE FOR NEXT CITIZENS ADVISORY COMMITTEE MEETING**

The next regular meeting of the Citizens Advisory Committee is scheduled for Tuesday, July 12, 2016 at 7:00 pm.

**12. ADJOURNMENT**

**MSC Tracy/Morton 4/0 to adjourn the meeting at 8:14 pm.**

Amy Fauls	Absent
Thomas Floen	Aye
Shari Long	Aye
Karen Morton	Aye
Luke Sabala	Absent
Karyn Sernka	Absent
Karen Tracy	Aye

Respectfully submitted;

\_\_\_\_\_  
Curt Sauer, General Manager

**COMPLIANCE PLAN FOR POTABLE WATER SYSTEM NO. 3610025**

**Chromium VI Remediation Project**

**Prepared by**

**Joshua Basin Water District**

**P.O. Box 675**

**Joshua Tree CA 92252**

**Report Distributed June 15, 2016**

**Updated July 20, 2016**

**Prepared for**

**Mr. Sean McCarthy, P.E.**

**Division of Drinking Water**

**State Water Resources Control Board**

**464 West 4th Street, Suite 437**

**San Bernardino, CA 92401**

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**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Compliance Plan Feasibility Statement  
Project No. A14014**

CHSC Section 116431 (b)

(b) (1) A compliance plan shall include all of the following:

(A) A compelling reason why it is not feasible for the system to presently comply with the primary drinking water standard for hexavalent chromium.

The Chromium VI Remediation Project will address the Health and Welfare of the Joshua Tree Community. As a response to Compliance Order No. 05-13-15R-003 the District began testing quarterly for the presence of Chromium VI from its production source wells. The results from this testing revealed that all 5 production well sites did not meet the new maximum contaminant level (“MCL”) for Chromium VI. Joshua Basin Water District (“JBWD”) is 100 % groundwater dependent District, due to its geographical location, the District does not have access to any surface water sources or supplemental potable water sources to offset its groundwater dependency. JBWD is also a 100% disadvantaged community this creates a real need for JBWD to acquire financial assistance in order to respond to the Chromium VI contamination and meet the new MCL by January 1, 2020 pursuant to Assembly Bill 385. This is not only significant to the local community, but also to the Morongo Basin region. The lack of potable water may prevent Hi-Desert Medical Center from providing vital health services to the 53,000 people they serve annually. Copper Mountain College may be prohibited from servicing approximately 2,700 people in their pursuit of higher education. JBWD wishes to maximize its most reliable local supplies, which are the Joshua subbasin, and the Copper mountain subbasin, the inability to produce water from these local supplies that meets state standards will cause JBWD to look into producing from more expensive supplemental supplies such as the state water project, and those supplies are far less dependable or sustainable than maximizing local supplies. Additionally higher costing supplies will further impact the Districts already disadvantaged communities if these proposed remediation projects are not funded and implemented. Noncompliance with the Chromium VI MCL will also subject the District to additional compliance orders, and subsequent monetary penalties from the SWRCB (CCR H&S 116650).

(B) A summary of the public water system’s review of available funding sources, the best available technology or technologies for treatment, and other options to achieve and maintain compliance with the primary drinking water standard for hexavalent chromium by the earliest feasible date.

The District has applied for Proposition 1 funding through the California State Revolving Fund. Additionally, the District has submitted its project to Mojave’s Integrated Regional Water Management Plan for regional funding opportunities. Future activities include pursuing grants through (1) Division of Water Resources, (2) United States Department of Agriculture, (3) and utilization of the District’s reserves which would require a rate increase via the Prop 218 process.

**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Compliance Feasibility Statement  
Project No. A14014**

(C) A description of the actions the public water system is taking and will take by milestone dates to comply with the primary drinking water standard for hexavalent chromium by the earliest feasible date. The actions may include, but are not limited to, planning, designing, permitting, financing, constructing, testing, and activating treatment facilities or other capital improvements. The compliance plan shall include the public water system’s best estimate of the funding required for compliance and the actions that the public water system will take to secure the funding. In no event shall the earliest feasible date extend beyond January 1, 2020.

Pursuant to BESST Technologies Inc. recommendations on (Task 3 – Hydrogeological/ Geotechnical Investigation) Well 14 Final Report: Dynamic Flow and Water Chemistry Survey dated October 10, 2015, and SB385 timeline, the following tasks have been outlined for JBWD’s Chromium VI Remediation Project.

The Chromium VI Remediation Project “study phase” includes three components; the first (Task 4 - Hydrogeological/Geotechnical Investigation) is a flow and water chemistry profile on well site number ten. This study will inform the district on whether in well blending, a minimal cost approach, is a viable solution for reducing the Cr-6 concentration. The second (Task 6 – Drilling of Test Well(s) is an exploratory bore hole test, which will provide useful data on whether drilling a new source, a medium cost approach, would provide sufficient system blending. The third (Task No. 7 Water Treatment Pilot Study) is a pilot study, in partnership with the Bureau of Reclamation and Mojave Water Agency, on weak base and strong base Cr-6 ion exchange treatment at district well sites fifteen and sixteen. These studies are already in process and have been since June 2015. As a recognized industry treatment solution (EPA approved), Ion Exchange treatment, a high cost approach, will bring all existing well sites below the MCL and bring the District immediately into compliance with the SWRCB. At this time, the district anticipates that we will be able to utilize some of the existing facility footprints; therefore, a notice of exemption has been prepared and filed with the San Bernardino County and the State Clearing House.

The Chromium VI Remediation Project “design phase” includes the District’s Engineering consultants performing (Task 5. Engineering Report) an evaluation on one or a combination of the following options: rehabilitate existing wells for in well blending, drill new sources, or retrofit well sites to include Cr-6 Ion Exchange Treatment. The Engineering report would include a summary of the alternatives evaluated, selection of a preferred alternative and proposed construction project, and basis of design, conceptual design, and opinion of probable construction costs for the selected construction project. Once funding is in place, the District Engineering consultant will begin Task 10. Plans and Specifications conducting final design preparing construction plans, specifications, and detailed cost breakdown for the selected construction project. The District’s Engineering Consultant has provided a preliminary estimate of \$1,531,000.

**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Compliance Feasibility Statement  
Project No. A14014**

The District has identified an additional \$85,000 through the procurement process for Task 4 and \$400,000 for Task 6 that was not available during the time of the preliminary engineering estimate. Therefore the new planning and design budget estimate is \$2,016,000 for both the study and design phases of this project. The “construction phase” will be determined based on the completion of Task 10 and available funding. The District’s Engineering Consultant has provided a preliminary estimate of \$15,444,000. The District estimates an additional \$309,000 for land acquisition. Therefore the new construction budget estimate is \$15,753,000 for the construction phase.



**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Definitions  
Project No. A14014**

“Approval” or “Approved” means Division action taken in writing and signed by the appropriate Division District Engineer or LPA representative to indicate its agreement with a public water system’s proposed Compliance Plan or revised Compliance Plan or Status Report.

“CCR” means California Code of Regulations.

“CHSC” means California Health and Safety Code.

“Compliance Order” means an order issued by the Division or LPA in accordance with CHSC Section 116655.

“Compliance Period” means the time period covered in a Compliance Plan

“Compliance Plan” means a public water system’s written plan for achieving compliance with the MCL, including designated tasks and timeline and schedule for completing each task.

“Division” means the State Water Resources Control Board’s Division of Drinking Water.

“Earliest feasible date” means the date proposed by a public water system and approved by the Division, as the earliest date by which the public water system can reasonably expect, based on factors presented in the public water system’s Compliance Plan, to achieve compliance with the MCL; in no case may such date be after January 1, 2020.

“LPA” or “Local Primacy Agency” has the meaning set forth in CHSC, section 116275(r).

“MCL” means the maximum contaminant level for hexavalent chromium established in 22 CCR 64431 & 64432.

“Shortest Period of Time” means the time period proposed by a public water system and approved by the Division, as the shortest period of time it will take that public water system to achieve compliance with the MCL; in no case may such time period extend beyond January 1, 2020.

“Status Report” means a written report submitted by a public water system to the Division which addresses the public water system’s progress towards achieving compliance with the MCL, as measured against the approved Compliance Plan

**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Notifications  
Project No. A14014**

**SWRCB Status Reports**

VII Status Reports – “A public water system granted a hexavalent chromium MCL Compliance Period must submit an initial status report on or before the 10th day of the first month in the calendar quarter following the first full calendar quarter after the Compliance Plan was approved by the Division/LPA. Subsequent reports must be submitted to the appropriate Division District Office or LPA Office on or before the 10th day of the first month in each calendar quarter and contain the status of all Compliance Plan activity which took place in the previous calendar quarter..”

As seen in the table below the District will report on the 10<sup>th</sup> day of the first month in each calendar quarter and contain the status of all Compliance Plan activities that took place in the previous calendar quarter.

Period Covered	Due Date
1st Quarter	10-Jan
2nd Quarter	10-Apr
3rd Quarter	10-Jul
4th Quarter	10-Oct

**Reporting Period Covered**

**Public Notifications**

IX Public Notice – “Section 116432 (c) requires each public water system granted a compliance period shall provide written notice regarding its approved compliance plan to persons it serves, a minimum of two times per year.”

As seen in the table below the District at a minimum will provides its consumers a written notice on or about April 10<sup>th</sup> and October 10 of each calendar year. The District will utilize the SB 385 Public Notifications template provided by the Division/LPA. The SWRCB will receive a copy of the notice within 10 days of supplying to the customer.

Period Covered	Due Date
1st Notice	10-Apr
2nd Notice	10-Oct

**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Compliance Plan Agents and Submittals  
Project No. A14014**

The General Manager (“Manager”) is the recognized agent who has the legal authority to act on behalf of the Joshua Basin Water District (“District”) on matters before the State Water Resource Control Board (“Division”) regarding the execution of the District’s Hexavalent Chromium Compliance Plan. The Manager is responsible for the administration and submittals of this Hexavalent Chromium Compliance Plan.

For purposes of administering the terms and provisions of this Hexavalent Chromium Compliance plan the authorized agents of the parties and their mailing addresses are as follows:

District: Curt Sauer, General Manager  
Joshua Basin Water District  
P.O. Box 675  
Joshua Tree, California 92252

Division: Mr. Sean McCarthy, P.E.  
Senior Sanitary Engineer  
Division of Drinking Water  
State Water Resources Control Board  
464 West 4th Street, Suite 437  
San Bernardino, CA 92401

Any notices or written communication between the parties shall be directed to the attention of the authorized agent. All correspondence will be submitted in writing and mailed or personally delivered to the above referenced Divisional Office. The District will make every effort to conform to the Division’s July 1, 2016 Guidelines for Electronic Submission of Documents.

**Joshua Basin Water District (“District”)  
Hexavalent Chromium Compliance Plan  
Scope of the Project  
Project No. A14014**

This Correction Plan will comply with all applicable requirements outlined in the SB 385 (CHSC, section 116431).

**Task No. 1 Funding Sources**

District Consultant (Bartle Wells & Associates) completed a rate study (Attachment C) on 12/11/2013; however, this rate study did not cover the costs associated with Chromium VI. The District anticipates moving forward with a new rate study in 2017 that will include Chromium VI costs. In addition to this rate study the District will pursue the following potential funding sources:

- Pursue grants/loans through the State Water Resource Control Board Division of Financial Assistance (“SWRCB-DOFA”).
- Pursue grants/loans through (“SWRCB-DOFA”) via Mojave’s Integrated Regional Water Management Plan.
- Pursue grants/loans through United States Department of Agriculture ("USDA")
- Pursue grants/loans through Division of Water Resources ("DWR")
- The utilization of the District’s reserves would require a rate increase going through the Prop 218 process.

**Task No. 2 Project Evaluation & Pre-Design Engineering [Completed]**

- a. Analyze all available alternatives and recommend the best option or combination of options to address the ranked problem.
  - We met with the District’s Engineering firm Dudek & Associates to request a preliminary engineering report that addressed the identification of viable water treatment or blending options to facilitate meeting water quality standards and system water demands.
- b. Preliminary Engineering Report from Dudek & Associates on June, 2015 findings.
  - It was determined that current infrastructure and concentrations were not feasible for blending. The recommendations are as follows:
    - i. Identify potential wells for in well blending
      - Complete well profile evaluations and water chemistry surveys on all wells to assess the potential for existing well screen modifications, thereby determining the viability of in-well blending by eliminating water contributions from high-Cr6 concentration strata.

- ii. Identify best available technology treatment at well head or centralized
  - Participate with the Bureau of Reclamation in pilot testing of strong and weak base ion exchange resins, and reduction coagulation filtration, to further identify the viability of these treatment options for District Cr6 compliance.
  - Complete additional groundwater flow profiling and water chemistry surveys for further refinement of available treatment options.
- iii. Identify potential locations for additional new or replacement sources
  - Complete water quality testing, data gathering, and hydrogeological profiling and investigations, in the western portion of District to assess water quality and the potential for drilling of supplemental or replacement production wells.

### **Task No. 3 Hydrogeological/Geotechnical Investigation [Completed]**

- a. Perform geotechnical and/or hydrogeological investigation. Describe type and purpose of any investigation.
  - On May 13<sup>th</sup>, 2015 the District retained BESST Technologies Inc. with the intent that they perform a Dynamic Flow and Water Chemistry Survey of our highest yielding Well Site. The purpose of this survey was to understand the Well's water quality vulnerabilities within the geological region and provide guidance on the District's ability to perform in well blending on its five active well sites to mitigate Chromium VI.
- c. Prepare geotechnical and/or hydrogeological investigation report for the site to assist with evaluation of project. (Note: Any report must be completed by a California licensed geologist, engineer, and/or hydrogeologist.)
  - On October 10th, 2015 the District obtained BEEST Technologies Inc. geotechnical investigation report which provides the following findings.

BESST's report concluded:

1. The zonal distribution of hexavalent chromium throughout the entire length of Well No. 14's perforated sections exceeds the California State MCL of 10 µg/L (showing 17 µg/L throughout the perforated interval).
2. The vertical zonal distribution "signature" for Well No. 14 appears to be consistent with those found in Wells No. 15 and No. 16, where there is very little change in zonal concentration with depth. This is a key point in that there seems to be very little differentiation between the concentration levels in the lower part of the Upper Aquifer zone and the upper part of the Middle Aquifer Zone. Meaning that although a stratigraphic differentiator has been assigned to distinguish one zone from the other, there does not appear to be a geochemical stratification between the Upper and Middle Aquifer Zones within each of these wells. They appear as a single geochemical zone.

3. The Well No. 16 zonal distribution in the USGS SIR 2004 report appears to be a false negative (falsely low between 380'-580' bgs) in light of the findings from a re-profiling of the well in 2006 (USGS 2007 letter report). This means that the hexavalent chromium concentrations through the interval from 380 to 580 feet bgs likely exceed 10 µg/L.
4. The well head concentration of Well No. 10 appears to suggest a decreasing hexavalent chromium concentration to the south of Well No. 14 – 17 and is only completed within the Upper Aquifer Zone. If there is little change in concentration with depth in Wells No. 14-16, then perhaps this could be the case for Well No. 10. Zonal concentrations within the Upper and Middle Zone Aquifers to the south of Well No. 10 may be even lower in hexavalent chromium concentrations.
5. There is a significant increase in the thickness of water bearing sediments on the east side of the Pinto Fault (within the Joshua Tree Groundwater Sub-basin).
6. There is little water quality data concerning the Deep Aquifer Zone throughout the area.

BESST's report recommendations:

- Perform an ambient (static) flow and water chemistry profile in Well No. 14 and geophysical Gamma Ray Survey in order to confirm the zonal water chemistry distribution that was obtained during the dynamic survey.

**Task No. 4 Hydrogeological/Geotechnical Investigation Site Surveying**

- a. Identify feasible locations to drill a test borehole.
- b. Perform required land surveying

BESST's report recommendations (continued):

- Following the ambient profiling and Gamma Ray Survey effort of Well No. 14, wells that are located to the West of Well No. 10 (and No. 14) will be located and tabulated with respect to their GPS coordinates.
- The following data will be collected for wells on the identification list where feasible:
  - Construction logs for each well if available.
  - Historical water quality data for each well if available.
  - Geological and geophysical data for each well if available.
- Once the data is collected, it will be plotted and evaluated and a report written on the findings.
- If there is a favorable outcome from this effort, then a representative groundwater sample from each well will be collected where feasible in order to verify past results and to see if there are any differences.
  - The monitoring wells will be sampled by low flow purging and sampling methods.
  - The residential well(s) can be sampled from a tap.
- Groundwater production wells to the West of Well No. 14 will be profiled.
  - An ambient and dynamic flow and water chemistry profile may be performed on Well No. 10 in order to determine why the well head concentrations have been just below and above the MCL.

- An ambient flow and water chemistry profile may be performed on JBWD Well No. 2 and No. 11. Well No. 2 has floating oil sitting above groundwater inside the well, technologies that can effectively sample (and profile) below the oil layer will be explored.
- Measure the thickness of the oil layer, and if feasible, a pump service company could remove most of the oil prior to sampling and/or performing an ambient survey.
- Being that there are no e-log records available for Wells No. 10, No. 2 and No.14, (and perhaps others), Gamma Ray surveys will be conducted in these wells in order to delineate key stratigraphic and other geological information that would be crucial to constructing the geological model of occurrence for the “good” and “bad” zonal locations of Cr6. These data will then be included in the geological cross sectional model.

### **Deliverables**

It is currently unknown what the results of this exploratory research will provide, as well as the estimated completion data.

### **Task No. 5 Engineering Report**

- a. Prepare and submit an engineering report to include summary of alternatives evaluated, selection of preferred alternative and proposed construction project, basis of design, conceptual design, and opinion of probable construction cost for the selected construction project
  - The Engineering Report will include discussions of the following topics:
    - a. Project Planning
    - b. Existing Facilities
    - c. Project Need
    - d. Alternatives Considered (monetary & non-monetary evaluations)
    - e. Capital and Annual O&M Costs
    - f. Selection of Preferred Alternative
    - g. Proposed Project Description
    - h. Conclusions & Recommendations
  - Contingent upon completing Task No. 3, No. 4, & No. 7.

### **Task No. 6 Drilling of One Test Well**

- a. Describe purpose of test well, depth of test well, water quality sampling, pump testing, test well log(s), etc.

BESST's report recommendations (continued):

- If the data obtained from the Task No. 4 described effort shows that there are consistently more reliable sources of groundwater to the West of Well No. 14, then in light of Cr6 treatment costs in perpetuity, JBWD will consider installing one exploratory borehole. Based on an evaluation of all of the information known to date as well as additional information obtained from the recommendations outlined above.
- The exploratory borehole will be composed of a long screened test well and then profiling the test well for both dynamic flow and water chemistry characteristics.

**b. Prepare design for test well.**

- Contingent upon Task No. 6a

**c. Prepare a complete set of bid solicitation and construction contract documents for the test well(s).**

- Contingent upon Task No. 6a

BESST's report recommendations (continued):

**d. Prepare test well report summarizing findings.**

- Contingent upon Task No. 6a

**e. Ensure Labor Compliance requirements are met for SDWSRF funding (see Enclosure 9).**

- Contingent upon Task No. 6a

**f. Convert Exploratory Borehole into Production Well**

- Contingent upon Task No. 6a

### **Task No. 7 Water Treatment Pilot Study**

**a. Describe purpose of pilot study and type of treatment being pursued;**

- Joshua Basin Water District has several wells above the Chromium VI maximum contaminant level. These results prompted the District to contact the Bureau of Reclamation and discussed with them pilot studies. The BOR provided the District with a proposal to test ion exchange and reverse coagulation filtration treatments specific to JBWD water conditions, and the potential application to other small community water districts with Chromium VI concerns. The Bureau and the District agreed to perform two Ion Exchange pilot studies at Well No. 15 & No.16; as well as, reverse coagulation filtration on Well No. 16.

**b. Identify number of pilot studies to be completed and treatment technologies being evaluated.**

- The best available technologies, as defined by the Environmental Protection Agency for hexavalent chromium removal are: 1) absorbent disposable media, 2) conventional treatment (e.g. reduction / coagulation / filtration), 3) membrane separation (nanofiltration and reverse osmosis) and 4) ion exchange. Of the best available technologies ion exchange was selected for hexavalent chromium testing at Joshua Basin due to 1) minimal waste



production: less than 0.05% of the raw water treated 2) minimal process footprint at full build out and 3) no additional water treatment processes were required.

- Several wells (10, 14, 16 and 17) within the basin have similar water quality in terms of competing anions (sulfate, nitrate and bicarbonate), which need to be considered for ion exchange. Competing anions shorten the throughput until ion exchange exhaustion with respect to hexavalent chromium. Of the wells with similar water quality (10, 14, 16 and 17), 16 had the highest hexavalent chromium concentration and that why it was a prime location for a pilot study. Well 15 had the highest sulfate concentration across all wells – at least 5 times greater than the next highest sulfate concentration. This is why Well 15 was chosen as the other pilot study. The presence of sulfate at well 15 would require testing of both weak and strong base ion exchange resin. Wells 16 would only be testing strong base ion exchange resin. The ion exchange resins considered for the testing process were weak and strong base anion exchange resin, both manufactured by the Purolite Corporation, where both are currently being used at full-scale installations.
- A design drawing package regarding the reduction coagulation filtration (RCF) pilot system was sent in January 2016 to the Joshua Basin Staff. Reclamation will be providing critical parts to the pilot system, but it has yet to be set up. Of note, is that RCF is an economically favorable alternative especially if the location of installation has a sewer connection that could handle the backwash waste. Since Joshua Basin Water District does not have a sewer connection an additional solids handling system would have to be considered as a critical part of the design. Testing is estimated to begin in the spring of 2016.

c. Perform pilot study of proposed treatment (Currently in process).

Testing for strong and weak base ion exchange is currently ongoing at Well No. 15:

- Three pilot columns (2" PVC) are being tested, one strong base resin, two weak base resin columns.
- Bi-weekly hexavalent chromium samples are being collected, up to tri-weekly samples on the strong base ion exchange resin column only when breakthrough is imminent.
- Loading rates to be tested (head loss dependent; between 8 and 15 gpm/ft<sup>2</sup> for the strong base resin).
- Multiple regeneration cycles to be performed to limit the influence of virgin resin on process performance for the strong base resin.
- Cycles until breakthrough are estimated to be up to 7,000 bed volumes for the strong base resin.
  - 7,000 bed volumes would last up to 3 weeks, depending on the loading rate.
- Reclamation will regenerate the strong base resin columns with sodium chloride brine.

- Using multiple regeneration approaches focused on decreasing the volume of waste to be disposed of.
- For the two weak base columns both loading rate (between 8 to 12 gpm/ft<sup>2</sup>) and pH (between 5.0 and 6.5) will be tested.
- Cycles until breakthrough are estimated to be 100,000+ for the weak base resin, which could take 10 months+.
  - Exhausted weak base resin will be analyzed for both uranium (uranate) and hexavalent chromium concentrations to determine the character of the waste and operational limitations in resin disposal.

Testing for strong base ion exchange is currently ongoing at Well No. 16:

- Three pilot columns (2" PVC) are being tested, all of which are strong base resin.
- Bi-weekly hexavalent chromium samples are being collected, up to tri-weekly samples on the strong base ion exchange resin column only when breakthrough is imminent.
- Loading rates to be tested (head loss dependent; between 8 and 15 gpm/ft<sup>2</sup>).
- Multiple regeneration cycles to be performed to limit the influence of virgin resin on process performance.
- Cycles until breakthrough are estimated to be up to 30,000 bed volumes
  - 30,000 bed volumes would last up to 3 months, depending on the loading rate.
- Reclamation will regenerate the columns with sodium chloride brine and determine waste fractions.
  - Using multiple brine approaches focused on decreasing the volume of waste to be disposed of.

d. Prepare pilot study report summarizing findings.

- Ultimately BOR will produce a pilot study report summary with results, recommendations and conclusions describing the treatment alternatives.

#### **Task No. 8 CEQA/NEPA**

a. Review project for possible CEQA Exemptions.

- The District expects to apply for a Mitigated Negative Declaration as it relates to Task No. 7 Treatment Plant facilities.
- The District expects to perform CEQA on any site determined by the evaluation Task No. 4.

b. Prepare required environmental documents.

- Any Mitigated Negative Declaration for Task No. 7 would be submitted during the Plans and Specifications Task No. 10.
  - Any CEQA application for Task No. 4 would be submitted subsequent to the site selection and during the Plans and Specifications Task No. 10.
- c. Prepare CEQA Documents for selected construction project to ensure compliance with CEQA and other State and Federal environmental requirements**
- The District expects to prepare CEQA documents on any site determined by the evaluation Task No. 4.
  - The District expects to prepare Mitigated Negative Declaration for facilities constructed relating to Task No. 7 Treatment Plant Facilities.

#### **Task No. 9 TMF Assessment**

- a. Prepare TMF assessment based on the SWRCB approved project identified from preliminary engineering;**
- Once approval is obtained from the SWRCB than the District will prepare this assessment
  - TMF documentation will be prepared and submitted in accordance with State guidelines as prescribed in the DWSRF Technical, Managerial and Financial (TMF) Guidelines, dated December 4, 2014, or current version thereto.
- b. Prepare all supporting documentation necessary to fulfill and complete requirements outlined in SWRCB TMF Assessment Form for Community Water Systems.**
- Once approval is obtain from the SWRCB than the District will prepare this assessment

#### **Task No. 10 Plans and Specifications**

- a. Conduct final design of selected construction project**
- Dependent upon the results of Task Order No. 4 & Task Order No. 7
- b. Develop the construction plans, specifications, and detailed cost breakdown for the selected construction project.**
- Dependent upon the results of Task Order No.4 & Task Order No. 7

Final design is projected to take 6 to 9 months and costs were estimated based on a cost per sheet of just under \$5,000, estimating 38-40 sheets per plan set (one plan set per well), resulting in a cost of \$950,000 (representing 6 percent of the identified construction cost).

**Task No. 11 Contingency [Miscellaneous Items Prior to Construction (Admin CEQA/NEPA, & Legal etc.)]**

In the event that the District experiences unforeseen costs within the Scope of the Project. The District has budgeted \$90,000 for unforeseen items associated with administrative or legal costs. Additionally, the District has budgeted \$45,000 for any CEQA documents needing to be prepared based on the evaluation from Task No. 4.

**Task No. 12 Land Acquisition**

- a. Determine value of any property, easements, or right of way necessary to pursue the selected construction project.
  - Dependent upon the results of Task Order No. 4 & Task Order No. 7. If this task becomes necessary it will comply with the Uniform Relocation Act.

**Task No. 13 Bidding and Award**

- a. Advertise for Bidding, Pre-Bid Meeting, Last Date for Contractor RFI's, Issue Addendum
  - Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7
- b. Bid Opening, Staff Review Bids, SWRCB Review Bids, Staff Report-Request for Governing Board Action
  - Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7
- c. Board of Directors Award Contract, Contracts signed, insurance & bonds, Notice to Proceed
  - Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**Task No. 14 Construction**

- a. Pre-Construction Meeting
  - Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**Task No. 14 Construction (Continued)**

**b. Shop Drawing Submittal Review**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**c. Procurement of Materials (Building, Piping and Utilities)**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**d. Procurement of Materials (Pumps, Motors, Mech, Elect, Tanks)**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**e. (1) Mobilize, (2) Clearing, Demolition, (3) Utilities, Yard Piping**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**f. Construct Building Foundation**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**g. Construct Building**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**h. (1) Mechanical and Electrical Equipping & (2) Off-Site Pipe and Piping Connections**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**i. Site Improvements/Grading/Paving**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**j. Programming, SCADA integration**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**Task No. 15 Testing and Startup**

**a. Startup, Testing, and Training**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**b. Cleanup, Demobilization**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**c. Project Complete**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**Task No. 16 Construction Management and Inspections**

**a. Monthly progress reports, weekly Statements of Working Days, and extra-work performance reports.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**b. Force account extra work reports and potential claim reports.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**c. Monthly CONSULTANT progress reports prepared by the CONSULTANT'S Project Manager and submitted with invoices for professional services.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**d. Contractors schedule updates and status reports.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**Task No. 16 Construction Management and Inspections (Continued)**

**e. Construction meeting agendas and minutes**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**f. Field measurement reports, notes, and observations, and all reports, calculations and other applicable documents prepared for the project as required by JBWD procedures**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**g. Shop Drawings, equipment submittals, and materials submittals reviewed by the JBWD and the CONSULTANT**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**h. Requests for Information (RFI's) and responses to RFI's**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**i. Implementation records of minor revisions to plans and specifications.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**j. Quality control and third-party inspection reports and findings.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**k. Contractor's progress payments requests**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**Task No. 16 Construction Management and Inspections (Continued)**

**l. Contract change order estimates**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**m. Project correspondence including, but not limited to, letters, memorandums, emails, and phone conversation records.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**n. Safety violations**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**o. Photographs.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**p. Punch list of items necessary for completion as part of final inspection.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**q. Contractor's as-built drawing and field sketches.**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**r. (Inspections) Daily inspection reports and extra-work diaries**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7



s. (Inspections) Field Measurement reports, notes, and observations, and all reports, calculations and other applicable documents prepared for the project as required by JBWD procedures

**Task No. 16 Construction Management and Inspections (Continued)**

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

t. (Inspections) Photographs.

- Dependent upon the results of Task Order No. 1, Task Order No. 4, & Task Order No. 7

**PROJECT BUDGET SHEET**  
**[Joshua Basin Water District]**  
**Project No. [A14014]**

<b>Task No.</b>	<b>Scope of the Project</b>	<b>Cost (\$)</b>
<b>1</b>	<b>Funding Sources (Water Rate Study)</b>	<b>\$ 25,000</b>
<b>2</b>	<b>Project Evaluation &amp; Pre-design Engineering</b>	<b>\$ 77,000</b>
<b>3</b>	<b>Hydrogeological/Geotechnical Investigation</b>	<b>\$ 30,000</b>
<b>4</b>	<b>Hydrogeological/Geotechnical Investigation Site Surveying</b>	<b>\$ 155,000</b>
<b>5</b>	<b>Engineering Report</b>	<b>\$ 154,000</b>
<b>6</b>	<b>Drilling of One Test Well</b>	<b>\$ 400,000</b>
<b>7</b>	<b>Water Treatment Pilot Study</b>	<b>\$ 60,000</b>
<b>8</b>	<b>CEQA/NEPA</b>	<b>\$ 500</b>
<b>9</b>	<b>TMF Assessment</b>	<b>\$ 25,000</b>
<b>10</b>	<b>Plans and Specifications</b>	<b>\$ 950,000</b>
<b>11</b>	<b>Contingency [Miscellaneous Items Prior to Construction (Admin, CEQA/NEPA, Legal etc.)]</b>	<b>\$ 135,000</b>
<b>TOTAL PLANNING &amp; DESIGN PHASE COSTS</b>		<b>\$ 2,016,000</b>
<b>12</b>	<b>Land Acquisition</b>	<b>\$ 309,000</b>
<b>13</b>	<b>Bidding and Award</b>	<b>\$ 0</b> <b>(Cost included in Task 15)</b>
<b>14</b>	<b>Construction</b>	<b>\$ 14,040,000</b>
<b>15</b>	<b>Testing &amp; Startup</b>	<b>\$ 0</b> <b>(Cost included in Task 15)</b>
<b>16</b>	<b>Construction Management &amp; Inspections</b>	<b>\$ 1,404,000</b>
<b>TOTAL CONSTRUCTION PHASE COSTS</b>		<b>\$ 15,753,000</b>
<b>TOTAL PROJECT COST</b>		<b>\$ 17,769,000</b>

Phase IV: Determination of Options-

- Once Task Order No. 4 and Task Order No. 7 have been completed, plant engineering designs and cost estimates for both the capital and the annual operations and maintenance cost will be developed by an engineering firm.
- The District will evaluate and compare the cost and feasibility of drilling new sources as explained in Task Order No. 4 versus the cost and feasibility of Ion Exchange well head treatment discussed in Task Order No. 7.
- The District will pursue any and all available grant funding associated with either option.
- The District may determine that a combination of options from Task Order No. 4 and Task Order No. 7 is the best approach to comply with the Hexavalent Chromium maximum contaminant level.
- The process and solution that the District decides to pursue will depend heavily on the grant monies available for assistance. Some solutions may prove to be too costly for the District to implement.

*\*The District will continue to provide updates to the SWRCB related to the status of the Proposed Corrective Plan ("Plan"). Due to the necessary ongoing data collection and unknown outcomes presented in Task Order No. 4 and Task Order No. 7, the Plan has the potential to require modification on a going forward basis. The District will continue to inform the SWRCB on any modification to the Plan, as well as, seek advice and direction from the SWRCB as appropriate.*

## PROJECT SCHEDULE FOR PLANNING

[Joshua Basin Water District]

Project No. [A14014]

**EXPECTED DATES OF COMPLETION**

<b>Task No.</b>	<b>Scope of the Project</b>	<b>Expected Time of Completion from the Date of Execution of a Funding Agreement (June 1, 2016)</b>	<b>Estimated Completion Date</b>
1	Funding Sources	56	1/1/2020
2	Project Evaluation & Pre-design Engineering [COMPLETED]	0	6/1/2015
3	Hydrogeological/Geotechnical Investigation & Site Surveying [COMPLETED]	0	10/1/2015
4	Hydrogeological/Geotechnical Investigation & Site Surveying	5	11/1/2016
5	Engineering Report	6	12/1/2016
6	Drilling of One Test Well	5	11/1/2016
7	Water Treatment Pilot Study	4	09/01/2016
8	CEQA/NEPA	7	1/1/2017
9	TMF Assessment	5	11/1/2016
10	Plans and Specifications	14	8/1/2017
11	Contingency [Miscellaneous Items Prior to Construction (Admin, CEQA/NEPA, Legal etc.)]	15	9/1/2017
12	Land Acquisition	2	8/1/2016
13	Bidding and Award	17	11/1/2017
14	Construction	39	8/1/2019
15	Testing & Startup	44	1/1/2020
16	Construction Management & Inspections	39	8/1/2019



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October 3, 2016

Dear Joshua Basin Water District Customer,

Your Board of Directors and I wish to bring you up to date on the revised Hexavalent Chromium regulation which was created with the passage of a State law in July, 2014. This is a complex topic the Board has discussed at least 13 times since April of 2014 and this is our fourth informational distribution. While some actions have been completed, there are many more to accomplish in order to be in compliance with State requirements by January 1, 2020.

In this month's bill you will find a Notification concerning the presence of Hexavalent Chromium (Chrome 6) in the District's water sources. Within the State-required template, we have given you what we hope is an informative update on our progress towards reaching compliance. District staff completed a Compliance Plan, which the State approved in June, 2016. Staff also completed a financial assistance proposal for the planning phase of the project that the State expects to approve in late September. This request was for \$2,016,000 of financial assistance, \$500,000 as a grant of funds, and \$1,516,000 as an interest free loan from the State Revolving Fund.

Although the Engineering Report is still being written, it is estimated that construction of treatment facilities at all 5 wells will cost approximately \$15,000,000. The District is preparing to apply for financial aid to the State as well as federal agencies. It is possible, although there have been no commitments, that the District may successfully compete for 5 to 10 million dollars of grants or low interest loans to finance the construction phase. Even so, our customers will need to fund a significant amount of the construction project costs as well as the annual operation and maintenance costs of the treatment facilities.

The State is requiring the District to conduct a rate study as part of the planning grant, however the Board recognizes the need for such a rate study as well since current revenues will not even come close to paying for this unfunded State mandate for Chrome 6 compliance.

As you can appreciate, this is a complicated project with intensive planning and implementation requirements to meet the January 1, 2020 deadline. We will keep you informed as we continue to address the issue.

Sincerely,

Curt Sauer  
General Manager

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información importante acerca de su agua potable.

Traducirlo o hablar con alguien que entiende bien. Este informe también está disponible en español en el sitio web del Distrito <http://www.jbwd.com/water-quality/chromium-6-information/>

### Joshua Basin Water District Has Levels of Hexavalent Chromium Above the Drinking Water Standard

Pursuant to a California regulation adopted July 1, 2014, the level of a substance called hexavalent chromium should not exceed 0.010 mg/l in drinking water provided by a public water system. This number is known as the maximum contaminant level or MCL. Senate Bill 385, which became law effective September 4, 2015, allows public water systems, with sources that produce water with a hexavalent chromium concentration above the MCL, time to come into compliance. So long as a public water system complies with the new law (Health & Safety Code, section 116431), it will not be deemed in violation of the MCL. In addition to other requirements, the new law requires the water system to come into compliance at the earliest feasible date prior to January 1, 2020.

After 22 months of quarterly source monitoring for hexavalent chromium, and as of the date of this notice, the level of hexavalent chromium in the water provided by our water system is determined to be above the MCL. Below you will find results from Joshua Basin Water District's ("District") latest Running Annual Average (RAA) based on the District's quarterly monitoring of its sources.

DATE	CONSTITUENT	SITE	RESULT	UNITS
12/9/2015	Chromium VI	WELL 10	0.012	mg/l
3/9/2016	Chromium VI	WELL 10	0.012	mg/l
4/6/2016	Chromium VI	WELL 10	0.012	mg/l
7/6/2016	Chromium VI	WELL 10	0.012	mg/l
<b>Running Annual Average</b>			<b>0.012</b>	<b>mg/l</b>
12/9/2015	Chromium VI	WELL 15	0.020	mg/l
3/9/2016	Chromium VI	WELL 15	0.019	mg/l
4/6/2016	Chromium VI	WELL 15	0.020	mg/l
7/6/2016	Chromium VI	WELL 15	0.020	mg/l
<b>Running Annual Average</b>			<b>0.020</b>	<b>mg/l</b>
12/9/2015	Chromium VI	WELL 16	0.044	mg/l
3/16/2016	Chromium VI	WELL 16	0.041	mg/l
4/6/2016	Chromium VI	WELL 16	0.039	mg/l
7/20/2016	Chromium VI	WELL 16	0.037	mg/l
<b>Running Annual Average</b>			<b>0.040</b>	<b>mg/l</b>
12/9/2015	Chromium VI	WELL 17	0.025	mg/l
3/16/2016	Chromium VI	WELL 17	0.026	mg/l
4/6/2016	Chromium VI	WELL 17	0.026	mg/l
7/20/2016	Chromium VI	WELL 17	0.027	mg/l
<b>Running Annual Average</b>			<b>0.026</b>	<b>mg/l</b>
12/1/2014	Chromium VI	WELL 14	0.019	mg/l
5/13/2015	Chromium VI	WELL 14	0.017	mg/l
9/16/2015	Chromium VI	WELL 14	0.018	mg/l
<b>Running Annual Average</b>			<b>0.018</b>	<b>mg/l</b>

*Note: Well 14 has been offline for (4) four consecutive quarters for well rehabilitation. Once the well is back online the District will resume quarterly monitoring.*

Although this is not an emergency, as our customer, you have a right to know what you should do, what happened, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. We will continue to monitor for the level of hexavalent chromium and provide you with regular notices, at least twice a year.

**What should I do?**

- This is not an emergency. If it had been, you would have been notified immediately. However, *some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.*
- If you have other health issues or concerns regarding your consumption of this water, you may wish to consult your doctor.

If you wish to avoid drinking the water provided by our water system, you may wish to use alternative water for drinking and cooking.

**Alternative Drinking Water**

Alternative sources of drinking water such as bottled water can be purchased at any local market, retail store, gas stations, etc. Specific information on Hexavalent Chromium levels in bottled water can be obtained from the bottled water website or Food and Drug Administration.

**What happened? What is being done?**

We intend to take steps to provide water with hexavalent chromium at or below the MCL. However, to achieve that will take time and money. We have a plan for achieving compliance with the MCL; and on June 15, 2016 we submitted our proposed compliance plan to the State Water Resources Control Board's Division of Drinking Water for its review and approval. The compliance plan was approved on June 30, 2016. The plan requires us to achieve compliance no later than January 1, 2020, which we believe is the earliest feasible date considering the complexity of the plan and the amount of funding required.

The approved compliance plan contains the following Tasks/Actions that the District will be taking, including a milestone schedule. This notice will be updated twice each year.

**To access the compliance plan in its entirety please navigate to the following web address: <http://www.jbwd.com/water-quality/chromium-6-information/>**

Task/Action	General Description	Scheduled Completion Date
Funding Sources	The District anticipates moving forward with a new rate study in 2017 that will include Chromium VI costs which are estimated to be \$17,769,000. In addition to this rate study the District will pursue the following potential funding sources: State Water Resource Control Board ("SWRCB") Division of Finance ("DOF"), United States Department of Agriculture, Division of Water Resources, Mojave Water Agency Integrated Regional Water Management Plan.	1/1/2020
Project Evaluation & Pre-Design Engineering	Analyze all available alternatives and recommend the best option or combination of options to address the ranked problem.	6/1/2015

<b>Task/Action</b>	<b>General Description</b>	<b>Scheduled Completion Date</b>
Hydrogeological/Geotechnical Investigation	Perform geotechnical and/or hydrogeological investigation. Perform an ambient (static) flow and water chemistry profile in Well 14 and geophysical Gamma Ray Survey in order to confirm the zonal water chemistry distribution that was obtained during the dynamic survey.	10/1/2015
Hydrogeological/Geotechnical Investigation Site Surveying	Identify feasible locations to drill a test borehole.	11/1/2016
Engineering Report	Prepare and submit an engineering report to include summary of alternatives evaluated, selection of preferred alternative and proposed construction project, basis of design, conceptual design, and opinion of probable construction cost for the selected construction project.	12/1/2016
Drilling of One Test Well	Describe purpose of test well, depth of test well, water quality sampling, pump testing, test well log, etc. Prepare design for test well. Prepare a complete set of bid solicitation and construction contract documents for the test well. Prepare test well report summarizing findings.	11/1/2016
Water Treatment Pilot Study	The Bureau of Reclamation and the District agreed to perform two Ion Exchange pilot studies at Well 15 & 16; as well as, a Reduction, Coagulation, Filtration pilot study at Well 16. Prepare pilot study report summarizing findings.	9/1/2016
California Environmental Quality Act ("CEQA") / National Environmental Policy Act ("NEPA")	Review project for possible CEQA Exemptions. Prepare CEQA Documents for selected construction project to ensure compliance with CEQA and other State and Federal environmental requirements.	1/1/2017
Technical Managerial Financial ("TMF") Assessment	Prepare TMF assessment based on the SWRCB approved project identified from the preliminary engineering report. Prepare all supporting documentation necessary to fulfill and complete requirements outlined in SWRCB TMF Assessment Form for Community Water Systems.	11/1/2016

<b>Task/Action</b>	<b>General Description</b>	<b>Scheduled Completion Date</b>
Plans and Specifications	Conduct final design of selected construction project. Develop the construction plans, specifications, and detailed cost breakdown for the selected construction project.	8/1/2017
Land Acquisition	Determine value of any property, easements, or right of way necessary to pursue the selected construction project.	8/1/2016



<b>Task/Action</b>	<b>General Description</b>	<b>Scheduled Completion Date</b>
Bidding and Award	Advertise for Bidding, Pre-Bid Meeting, Last Date for Contractor RFI's, Issue Addendum. Bid Opening, Staff Review Bids, SWRCB Review Bids, Staff Report-Request for Governing Board Action. Board of Directors Award Contract, Contracts signed, insurance & bonds, Notice to Proceed.	11/1/2017
Construction	Pre-Construction Meeting. Shop Drawing Submittal Review. Procurement of Materials (Building, Piping and Utilities). Procurement of Materials (Pumps, Motors, Mech., Elect., Tanks). Mobilize, Clearing, Demolition, Utilities, Yard Piping. Construct Building Foundation. Construct Building. Mechanical and Electrical Equipping & Off-Site Pipe and Piping Connections. Site Improvements/Grading/Paving. Programming, SCADA integration.	8/1/2019
Testing and Startup	Startup, Testing, Training, Cleanup, and Demobilization.	1/1/2020
Construction Management and Inspections	Monthly progress reports, weekly Statements of Working Days, and extra-work performance reports. Force account extra work reports and potential claim reports. Monthly CONSULTANT progress reports prepared by the CONSULTANT'S Project Manager, and submitted with invoices for professional services. Contractors schedule updates and status reports.	8/1/2019

Below is a description of work in progress or completed on Tasks/Actions from the District's approved compliance plan.

<b>Task/Action</b>	<b>Work Completed</b>	<b>Task Completion Status (%)</b>
Funding Sources (Pursue SWRCB funding)	The District submitted the grant application and responded to all inquiries from the SWRCB DOF to make the District's Chromium VI Remediation Project (Planning Phase) eligible for \$2,016,000 in financial assistance. This work included revising the project scope, budget, and schedule to meet Division of Financial assistance requirements. The District submitted the project's Preliminary Engineering Report. The SWRCB DOF is currently finalizing a \$500,000 grant and \$1,516,000 interest free loan for the District.	98% (Ongoing)

<b>Task/Action</b>	<b>Work Completed</b>	<b>Task Completion Status (%)</b>
Project Evaluation & Pre-Design Engineering	Preliminary Engineering Report from Dudek & Associates received in June, 2015.	100%
Hydrogeological/Geotechnical Investigation Site Surveying	The District has received proposals to perform the anticipated Hydrogeological/Geotechnical it would take to identify feasible locations to drill a test borehole.	10%
Hydrogeological/Geotechnical Investigation	The District completed an ambient (static) flow and water chemistry profile on Well No. 14 and geophysical Gamma Ray Survey. The Ambient Profile Report has been finalized and the District is reviewing its conclusions and recommendations for moving forward.	100%
Water Treatment Pilot Study	The District conducted two pilot studies one at Well No. 15 studying Weak Base Ion Exchange and one at Well No. 16 studying Strong Base Ion Exchange.	95%
Water Treatment Pilot Study	The District's Well No. 16 Reduction Coagulation Filtration pilot study was brought online in August 2016.	1%

The District is endeavoring to comply with the earliest feasible date outlined in the Compliance Plan. However, the District's lack of monetary means and the time associated with addressing the project's Professional Geologists recommendations could prohibit the District from reaching the anticipated deadline for some tasks.

On July 20, 2016 the District requested and received approval from the SWRCB for an update to the compliance plan for the following reason. The District's Chromium VI Remediation Project partner the Bureau of Reclamation requested to extend the deadline for Well 16 Ion Exchange out to September 6, 2016.

For more information, please contact Curt Sauer, General Manager at 760-366-8438 or P.O. Box 675, Joshua Tree, CA 92252

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by Joshua Basin Water District.

State Water System ID#: 3610025. Date distributed: October 3, 2016.