

GRAND LAKE CLARITY STAKEHOLDERS' MEMORANDUM OF UNDERSTANDING

The Parties to this Memorandum of Understanding (“MOU”) are the U.S. Department of the Interior Bureau of Reclamation (“Reclamation”), Northern Colorado Water Conservancy District (“Northern Water”), Municipal Subdistrict (“Subdistrict”), Windy Gap Firming Project Water Activity Enterprise (“Enterprise”), Grand County Board of County Commissioners (“Grand County”), Northwest Colorado Council of Governments (“NWCCOG”), Colorado River Water Conservation District (“River District”), and Town of Grand Lake (“Town”).

I. RECITALS

- A.** WHEREAS, in 2016 the Parties, except for the Town, Subdistrict, and Enterprise, entered into the Grand Lake Clarity Stakeholders’ Memorandum of Understanding, Memorandum of Understanding No. 16-LM-60-2578 (“2016 MOU”), for the purpose of establishing an adaptive management process for Colorado-Big Thompson (“C-BT”) Project operations to address water clarity in Grand Lake;
- B.** WHEREAS, since 2016 the parties to the 2016 MOU have cooperated to implement its provisions, and in 2021 extended the effective date of the 2016 MOU to December 31, 2026; and
- C.** WHEREAS, with the 2016 MOU expiring on December 31, 2026, the Parties now desire to enter into this MOU to continue on a long-term basis the 2016 MOU’s operational adaptive management framework, and to incorporate into that framework additional collaborative initiatives to provide watershed health benefits within and upstream of Grand Lake, Shadow Mountain Reservoir, Granby Reservoir, and the Colorado River between Shadow Mountain Reservoir and Granby Reservoir (the “Three Lakes System”) with the goal of enhancing clarity and overall water quality.

II. PURPOSE

The purpose of this MOU is to continue on a long-term basis an adaptive management process to improve clarity in Grand Lake, seeking, consistent with the Colorado Water Quality Control Commission’s (“Commission”) clarity standard (5 CCR 1002-33, p. 197, Upper Colorado River Segment 12), “the highest level of clarity attainable, consistent with the exercise of established water rights, the protection of aquatic life, and protection of water quality throughout the Three Lakes system,” and pursuant to the commitments relating to clarity as described herein. “Adaptive Management” under this long-term MOU (1) continues the 2016 Grand Lake Adaptive Management framework for managing C-BT Project operations (“Operational Adaptive Management”); and (2) incorporates additional collaborative initiatives to enhance clarity and provide watershed health benefits within and upstream of the Three Lakes System, as set forth in Section VII below (“Stewardship Initiatives”). This MOU replaces the 2016 MOU in its entirety as of January 1, 2027.

III. TERM

This MOU is effective from January 1, 2027 until January 1, 2058. This MOU will automatically renew for a successive 30-year term unless any Party notifies the other Parties before January 1, 2057 of its intention to no longer continue participating in the MOU at the end of the term or its desire to modify provisions of the MOU before any renewal or extension of the term. If the MOU is not renewed at the end of the term, any funding dedicated by any Party for the Stewardship Initiatives and Operational Adaptive Management process described in this MOU and its appendices will revert to the contributing Party.

IV. OPERATIONAL ADAPTIVE MANAGEMENT COMMITTEE

- A. Representation.** Each Party shall be a member of the Adaptive Management Committee (“AMC”), except that the Subdistrict and the Enterprise will be represented by Northern Water for purposes of participation in the AMC.
- B. Participation in AMC meetings.** Multiple representatives of each Party may attend and participate in the AMC meetings, as it is expected that the Operational Adaptive Management process will rely on multiple areas of expertise. However, each Party shall reconcile internal differences and present its unified position to the AMC. The Parties’ positions may differ.
- C. Stakeholders.** The Parties may choose to invite additional stakeholders to attend AMC meetings, and stakeholders may provide the Parties with information that may be relevant to the Operational Adaptive Management process.

V. OPERATIONAL ADAPTIVE MANAGEMENT

- A. Narrative Standard.** This MOU is to implement the Commission’s narrative water quality standard:

“The highest level of clarity attainable, consistent with the exercise of established water rights, the protection of aquatic life, and protection of water quality throughout the Three Lakes system.”

5 CCR 1002-33, Numeric Standards Table, at p. 13 (June 30, 2015).

- B. Clarity Goals.** The annual Clarity Goals for Grand Lake from July 1 through September 11 are the Commission’s adopted goal qualifiers, which are currently an average Secchi depth of 3.8 meters and a minimum Secchi depth of 2.5 meters.
- C. Grand Lake Clarity Operational Planning**

1. Preparation of Grand Lake Clarity Operational Plan. On or before June 1 of each year, subject to hydrology, meteorology, and current demands, Reclamation will identify operational scenarios to be modeled and evaluated and will meet with members of the AMC to seek input from individual members on these scenarios.

- a. Reclamation shall present operational scenarios to the members of the AMC along with the results from the corresponding water quality model runs.
- b. The members of the AMC shall review the scenarios and provide individual input and feedback on the operational scenarios at the meeting scheduled on or before June 1.
- c. Reclamation shall consider input provided by members of the AMC, and shall present a Draft Operational Plan and water quality model runs on or before June 15.
- d. The members of the AMC shall review the Draft Operational Plan and members shall individually provide input to Reclamation.
- e. Reclamation shall announce to the members of the AMC its Proposed Final Operational Plan on or before June 21.
- f. In developing its Draft Operational Plan and Proposed Final Operational Plan, Reclamation may consider and implement, in consultation with the AMC members, adjustments to meeting dates and water quality modeling, as well as the use of other modeling, forecasting, and decision support system tools to better reflect existing or anticipated conditions in the Three Lakes System without requiring amendment of this MOU.

2. Deliveries and yield. C-BT Project deliveries and yield shall be protected.

3. Water Quality Conditions

- a. **Consideration of Water Quality Indicators.** When individual members of the AMC determine on the basis of monitoring, modeling or other analysis that any of the Water Quality Indicators relevant to Grand Lake clarity reach or are expected to reach certain thresholds (as described in i, ii and iii below), such members may provide input to Reclamation. The status of Water Quality Indicators shall be included in the Weekly Summary Forms (as described in Exhibit B), which may be updated from time to time as mutually agreed by the Parties, without requiring amendment of this MOU.
 - i. **Grand Lake Secchi depth.** The moving average Secchi depth of index sites (July 1 to date) in Grand Lake is 3.8 meters or less (Exhibit A).

- ii. **Dissolved Oxygen (DO).** DO levels in Shadow Mountain Reservoir are 3 mg/L or less at the bottom or DO saturation near the surface exceeds 100% (Exhibit A).
 - iii. **pH.** pH in Shadow Mountain Reservoir is greater than 8 S.U. near the surface (Exhibit A).
- b. **Consideration of Water Quality Standards.** The AMC members recognize that C-BT Project operations to meet the Clarity Goals may impact water quality in other parts of the Three Lakes System and may recommend efforts to minimize exceedances of the water quality standards of the Three Lakes System from July 1 through September 11.
- c. **Shadow Mountain Monitoring.** Monitoring will be carried out as explained in Exhibit A. Northern Water will make every effort to maintain the monitoring buoys in Shadow Mountain Reservoir but adjustments may be necessary in the event of an equipment failure. In such event, the AMC members shall recommend monitoring protocols to collect necessary data in support of the AMC process. Northern Water shall be responsible for maintaining the monitoring buoys or similar equipment to provide water quality data that supports the Operational Adaptive Management process, including the costs associated with replacing the buoys if the Parties agree that replacing the buoys is necessary to provide sufficient data. The monitoring methods and equipment, and Exhibit A, may be updated from time to time as mutually agreed by the Parties, without requiring amendment of this MOU.

The AMC members may adjust the thresholds and selected water quality indicators as mutually agreed by the Parties, without requiring amendment of this MOU.

- 4. **Operational Adaptive Management Meetings.** At a minimum, AMC members shall meet in person each year on or before June 1 to discuss the anticipated stream flow and hydrologic forecasts, C-BT Project Operations, and Northern Water and Subdistrict delivery obligations. AMC members will provide input to Reclamation for consideration in the operational scenarios (see **V.C.1**). The AMC will schedule weekly conference calls during the period of concern for Grand Lake clarity (July 1 through September 11) and meet as needed to discuss current and foreseeable operational deviations and water quality. During these calls, members may discuss and recommend potential operational changes that could help in meeting Clarity Goals.

Members of the AMC may provide input to Reclamation to modify the Operational Plan as needed during the weekly conference calls. Adaptive Management may include Reclamation making changes in the C-BT Project operations or other appropriate measures. Reclamation will evaluate any input provided.

5. Adaptive Management Record. A Record of the discussions held during the meetings, input, decisions and objections made shall be maintained and compiled by the AMC. The purposes of the Record include, but are not limited to, (1) assisting in the evaluation of C-BT Project operational approaches to meet the Clarity Goals, as well as effects on Water Quality Indicators (see V.C.3.a), and (2) providing feedback for Adaptive Management.

- a. **Meeting Minutes.** The AMC shall record minutes of AMC meetings.
- b. **Weekly Summary Form.** A Weekly Summary Form shall be prepared and distributed by Northern Water to the AMC at the weekly meetings. The Weekly Summary Form should include a summary of water quality data, operational parameters of interest, and brief notes on action items and discussion topics from the previous meeting. The information will be presented using the Weekly Summary Form template as presented in Exhibit B.
- c. **Comments.** Written comments submitted by any Party shall be attached to the Weekly Summary Form for that meeting.
- d. **Annual Summary.** The AMC shall annually prepare a summary of what it learned about C-BT Project operational approaches to meet the Clarity Goals, as well as effects on water quality, which it shall provide to the Commission.

VI. FUNDING FOR OPERATIONAL ADAPTIVE MANAGEMENT

- A. The Parties' initial contribution to Operational Adaptive Management shall be the services of their staff members.
- B. If the AMC intends to incur any costs associated with the implementation of Operational Adaptive Management, the Parties shall agree in advance to a funding mechanism for such cost(s), consistent with each Party's applicable legal requirements.
- C. This MOU does not assign or allocate responsibility for funding implementation of any measures related to the Operational Adaptive Management process. Without acknowledging or admitting such responsibility, the Parties agree to work together to address implementation of measures in support of the Operational Adaptive Management process, such as monitoring and reporting costs and securing adequate sources of funding therefor.
 - 1. Any agreement with consultants shall expressly recognize and implement such limitation.
 - 2. Any obligations of Grand County, the River District, NWCCOG, Northern Water, the Subdistrict, the Enterprise, and the Town shall not constitute a general obligation, indebtedness, or multiple fiscal year direct or indirect debt or other financial

obligation whatsoever, within the meaning of the Constitution or laws of the State of Colorado.

3. All public funding shall be subject to annual appropriation.

- D. Northern Water has a contractual relationship with the United States as defined by its 1938 Repayment Contract and related documents. Nothing herein changes Northern Water's obligations as defined by that contract and related documents except as identified in Section X below, and Northern Water's commitments under this MOU are otherwise separate from Northern Water's obligations under that contract and related documents.

VII. THREE LAKES WATERSHED STEWARDSHIP INITIATIVES

In addition to the Operational Adaptive Management process set forth in Section V above, the Parties agree to work cooperatively to incorporate into this MOU the Stewardship Initiatives, which are additional collaborative initiatives to provide watershed health benefits within and upstream of the Three Lakes System with the goal of enhancing clarity and overall water quality.

- A. An initial list of potential initiatives is attached as **Appendix A**, which may be updated from time to time upon mutual agreement of the Parties without requiring any modification of this MOU.
- B. The funding process for the Stewardship Initiatives is described in the attached **Appendix B**. As described in more detail in Appendix B, Northern Water, the Subdistrict, and the Enterprise together agree to contribute a total of \$1 million per year, for a total of \$30 million over the term of this MOU, to assist in implementing the Stewardship Initiatives described in Appendix A. This fund is referred to as the Three Lakes CLEAR (Clarity, Legacy, Ecosystem, Adaptation, and Resilience) Fund, or "Three Lakes CLEAR."
- C. As explained in Appendix B, the use of Three Lakes CLEAR shall be governed by a Governance Committee comprised of the MOU Parties, with each Party having one vote. The Governance Committee shall identify which of the initiatives identified in Appendix A will receive funding from Three Lakes CLEAR and decide what portion of Three Lakes CLEAR will be provided for each initiative. The Governance Committee may prioritize funding for those initiatives that can be funded with financial contributions from more than one Party, or through grants or other cost-sharing mechanisms.
- D. A majority vote of the Parties that includes the affirmative votes of Northern Water, the Subdistrict, and the Enterprise shall be required to approve any decision to fund an initiative using any portion of Three Lakes CLEAR. Such affirmative votes by Northern Water, the Subdistrict, and the Enterprise shall only be required for funding decisions that allocate funds provided by Three Lakes CLEAR.

- E. All funding is subject to the provisions of this MOU and may revert to the contributing Parties as described herein. The initiatives described in Appendix A and funding process described in Appendix B may be the subject of additional agreements among the Parties, separate from the funding for the Operational Adaptive Management process described in Section V above. Any future payments are subject to the appropriations limitations described in Section VI above.

VIII. COMMISSION'S NARRATIVE STANDARD

This MOU continues the interim process described in the 2016 MOU as the mechanism for implementing the narrative standard and goal qualifiers. During the term of this MOU, no Party will independently propose, or cause others to propose, that the Commission adopt a different clarity standard or goal qualifiers without first providing notice and attempting to work with the Parties, provided that the provisions of this MOU are being implemented. The Parties agree to cooperate in proposing any changes to the clarity standard or goal qualifiers for Grand Lake.

- A. If any Party proposes to the Commission the adoption of a different clarity standard or goal qualifiers, Northern Water, the Subdistrict, or the Enterprise may elect, in its sole discretion and in addition to pursuing any other legal or equitable remedies that may be available, (1) to revert to Northern Water, the Subdistrict, or the Enterprise any portion of the then-current balance of Three Lakes CLEAR and any future contributions to Three Lakes CLEAR that have not yet been allocated by the Governance Committee to a specific initiative; and/or (2) to withdraw from participating in the Operational Adaptive Management process described in Section V of this MOU.
- B. If any other person or entity that is not a Party proposes to the Commission the adoption of a different clarity standard or goal qualifiers, then the Parties shall first evaluate and collectively discuss the proposal. If the Parties do not unanimously agree to collectively oppose or support the proposal, Northern Water, the Subdistrict, or the Enterprise may elect, in its sole discretion and in addition to pursuing any other legal or equitable remedies that may be available, (1) to revert to Northern Water, the Subdistrict, or the Enterprise any portion of the then-current balance of Three Lakes CLEAR and any future contributions to Three Lakes CLEAR that have not yet been allocated by the Governance Committee to a specific initiative; and/or (2) to withdraw from participating in the Operational Adaptive Management process described in Section V of this MOU.

IX. SUPPORT FOR MOU

The Parties agree to support implementation of this MOU as a reasonable approach to address Grand Lake clarity, and no Party shall encourage or support non-Parties in challenging this MOU or its provisions.

X. SATISFACTION OF LEGAL REQUIREMENTS

A. Grand County hereby acknowledges and confirms that the portion of Condition 7 of the 2012 Windy Gap Firing Project – 1041 Permit (“1041 Permit”) that requires execution of the Clarity MOU prior to the effective date of the 1041 Permit is satisfied by:

1. The execution of the Clarity MOU dated January 28, 2016; and
2. This Clarity MOU, so long as Northern Water, the Municipal Subdistrict and/or the Enterprise are participating as Parties to this MOU.

This MOU also replaces the Umbrella Agreement referred to on the list of documents attached to the 1041 Permit.

B. In addition, the Parties acknowledge and confirm that performance of the commitments under this MOU satisfies the following obligations toward clarity over the duration of this MOU:

1. Sections 2(b) and 4(a) of Supplement No. 10 to the 1938 Repayment Contract between Reclamation and Northern Water; and
2. Paragraph 10 of the December 31, 2012 Intergovernmental Agreement between Northern Water, Grand County, Middle Park Water Conservancy District, and the River District.

XI. MODIFICATION

No modification or waiver of this MOU or any covenant condition or provision contained herein shall be valid unless approved in writing by the Parties.

XII. NO WAIVER

The Parties acknowledge that there are differences of opinion regarding the scope of obligations to protect water clarity in Grand Lake created by Senate Document 80, the Clarity Supplement, and the Colorado Clarity Standard Process. These issues have not been litigated. The Parties agree that in entering into this MOU and not litigating or otherwise objecting in any form to the legal issues specified above, that this MOU shall never give rise to any claim, defense or theory of acquiescence, bar, merger, issue or claim preclusion, promissory estoppel, acquittal estoppel, waiver, laches, unclean hands or any other similar position or defense concerning any factual and legal position regarding the Parties’ respective positions regarding Grand Lake clarity and the Parties’ respective interpretations of Senate Document No. 80, the 1938 Repayment Contract, Reclamation Law, or Colorado law, except as recognized in Section X above. The Parties further agree that they do not intend this MOU to have the effect of precedent or preclusion on any factual or legal issue in any other matter. The Parties expressly reserve their rights to assert any legal or factual position or challenge the legal or factual position taken by any other Party on any other matter.

XIII. BINDING AGREEMENT

This MOU shall be binding upon the Parties, and their respective successors or assigns, except as provided in Section XVI below. The Parties' rights and obligations under this MOU may not be assigned without the express written consent of all Parties.

XIV. ENTIRE UNDERSTANDING

This MOU is the complete integration of all understandings between the Parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein in writing.

XV. THIRD PARTIES

- A.** This MOU does not create, and the Parties do not intend to create, in any other individual or entity the status of third-party beneficiary, and this MOU shall not be construed to create such status. The rights, duties and obligations documented in the MOU shall operate only between the Parties to this MOU, and shall inure solely to the benefit of the Parties to this MOU.
- B.** The provisions of this MOU are intended only to assist the Parties in determining or performing their obligations under this MOU.
- C.** This MOU does not and shall not be deemed to confer upon or grant to any third-party any right enforceable at law or equity arising out of any term, covenant, or condition herein or the breach thereof.

XVI. NO RIGHTS AGAINST THE UNITED STATES

This MOU is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any Party against the United States, its departments, agencies, or entities its officers, employees, or agents, or any other person.

XVII. SEVERABILITY

In case one or more of the provisions contained in this MOU, or any application hereof, shall be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained in this MOU and the application thereof shall not be in any way affected or impaired thereby.

XVIII. COMPLIANCE WITH LAWS

At all times during the performance of this MOU, the Parties shall strictly adhere to all applicable federal, state and local laws, rules, regulations that have been or may hereafter be established.

XIX. SOVEREIGN IMMUNITY

The Parties do not waive their sovereign immunity by entering into this MOU, and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this MOU.

XX. EFFECT ON OTHER AGREEMENTS

Nothing in this MOU affects contracts or other agreements that may exist between any combinations of the Parties, except as recognized in Section X above.

XXI. EFFECTIVE DATE

This MOU shall become effective on January 1, 2027, although a majority of the Parties may agree to implement this MOU if the signature of any other Party(ies) is a mere formality.

XXII. WEST SLOPE COORDINATION

For decision making pursuant to this MOU, Grand County, NWCCOG, the River District, and Town will strive to develop a unified “West Slope” position to the greatest extent possible. In no circumstance will this unified position be considered a single vote under this MOU.

XXIII. TERMINATION

This MOU may only be terminated upon the unanimous consent of the Parties. If terminated, any funding dedicated by any Party for the Stewardship Initiatives and Operational Adaptive Management process described in this MOU and its appendices will revert to the contributing Party.

XXIV. LITIGATION RELATING TO GRAND LAKE CLARITY

If any Party or other person or entity initiates litigation in any administrative or judicial forum against Northern Water, the Subdistrict, the Enterprise, or Reclamation relating to Grand Lake clarity during the term of this MOU, Northern Water, the Subdistrict, or the Enterprise may elect, in its sole discretion and in addition to pursuing any other legal or equitable remedies that may be available, (1) to revert to Northern Water, the Subdistrict, or the Enterprise any portion of the then-current balance of Three Lakes CLEAR and any future contributions to Three Lakes CLEAR that have not yet been allocated by the Governance Committee to a specific initiative; and/or (2) to withdraw from participating in the Operational Adaptive Management process described in Section V of this MOU.

IN WITNESS WHEREOF, the Parties hereto have signed this MOU effective as of the date and year written above.

**NORTHERN COLORADO WATER
CONSERVANCY DISTRICT**

Signed by:
By: 
CE064C1813E543C...
Dennis Yanchunas, President

Date: July 23, 2026

**MUNICIPAL SUBDISTRICT OF THE
NORTHERN COLORADO WATER
CONSERVANCY DISTRICT**

Signed by:
By: 
2E7C1387239447B...
Bill Emslie, President

Date: July 28, 2026

**WINDY GAP FIRING PROJECT
WATER ACTIVITY ENTERPRISE**

Signed by:
By: 
2E7C1387239447B...
Bill Emslie, President

Date: July 28, 2026

TOWN OF GRAND LAKE

Signed by:
By: 
8D4676AB890E403...
Christina Bergquist, Mayor

Date: July 27, 2026

**NORTHWEST COLORADO COUNCIL
OF GOVERNMENTS**

Signed by:
By: 
72B3B86ABA1E48C...
Alyssa Shenk, Chair

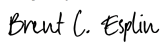
Date: July 25, 2026

**GRAND COUNTY BOARD OF COUNTY
COMMISSIONERS**

Signed by:
By: 
7AF8E0D7247946A...
Edward Raegner, Chair

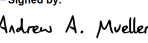
Date: July 23, 2026

BUREAU OF RECLAMATION

Signed by:
By: 
72B29FAC2C8B40A...
Brent C. Esplin, Regional Director

Date: July 23, 2026

**COLORADO RIVER WATER
CONSERVATION DISTRICT**

Signed by:
By: 
CC26526808D9419...
Andrew A. Mueller, General Manager

Date: July 23, 2026

November 12, 2015

EXHIBIT A – WATER QUALITY INDICATORS MONITORING

SECCHI MONITORING

For the purpose of the adaptive management process aiming at reaching Grand Lake Clarity goals as defined in the MOU, Secchi data will be collected as follows:

1. Three Index Sites: GL-WES, GL-MID, GL-ATW (Figure 1)

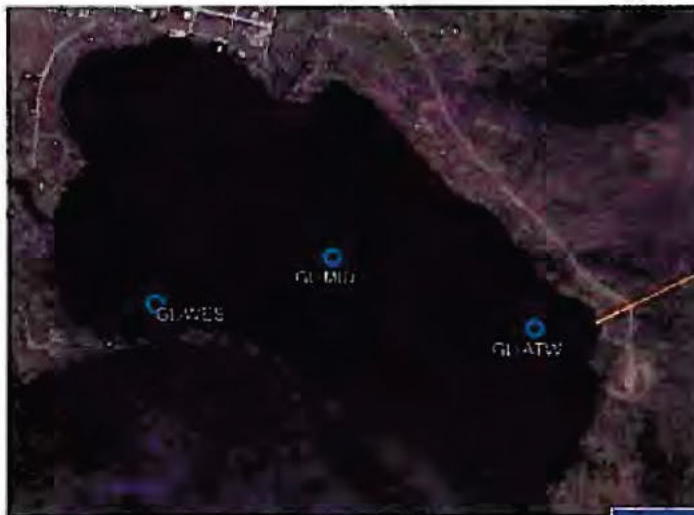


FIGURE 1 - GRAND LAKE SECCHI MONITORING INDEX SITES

2. Sampling frequency
 - a. Once a week starting May 1 (or as soon as ice is off)
 - b. Three times a week from July 1 to September 11
 - c. If necessary based on operational plans during Jul 1- Sep 11, sampling may be increased to daily (Mon-Fri)
 - d. Once a week from Sep 12- October 30
3. During the period of Jul 1 – Sep 11, measurements shall be taken at all three sites¹ on a given day and shall be averaged for the purpose of evaluating:
 - a. Jul-to date average against the 3.8 m goal (an example is shown in Figure 2)
 - b. Jul-to date minimum against the 2.5 m goal (an example is shown in Figure 3)
4. Secchi measurements will be taken according to the *Secchi Monitoring Protocol for Grand Lake (ATTACHMENT 1)*
5. Secchi measurements will be taken with a viewscope

Figures 2 and 3 are presented as examples of how the water quality information may be compiled.

¹ As described in Attachment 1, two Secchi measurements are taken at each site with a viewscope. These two measurements shall be averaged to produce one value.

November 12, 2015

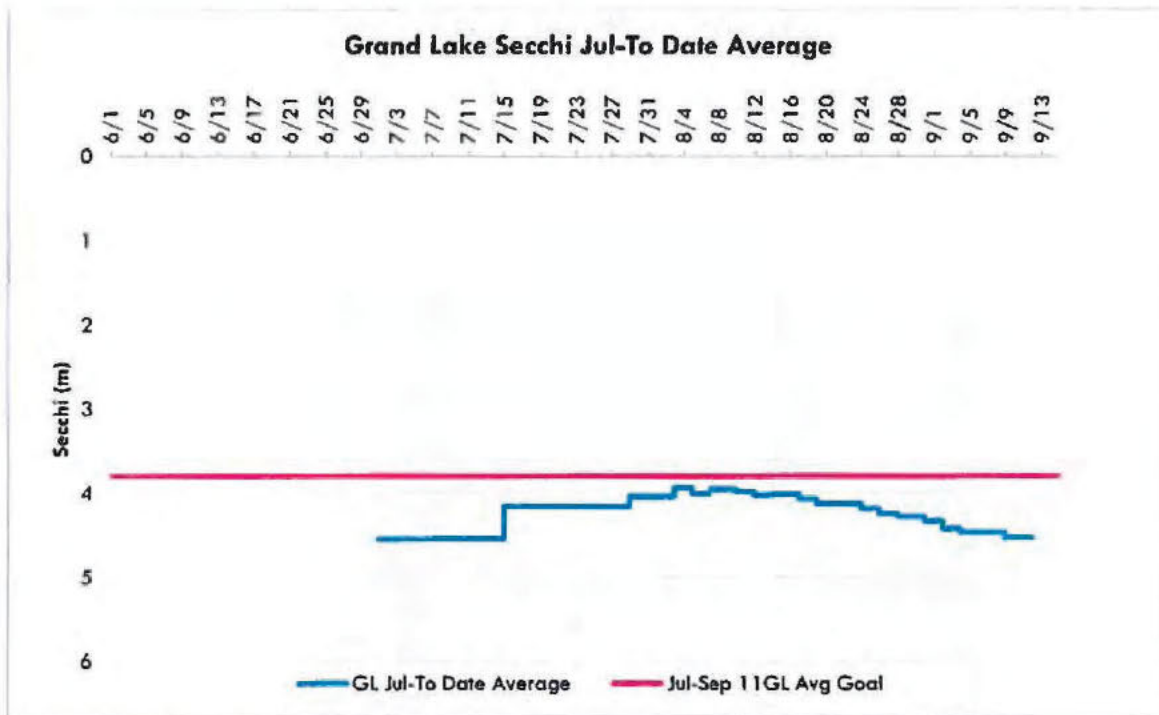


FIGURE 2 - GRAND LAKE SECCHI JUL 1 - TO DATE AVERAGE

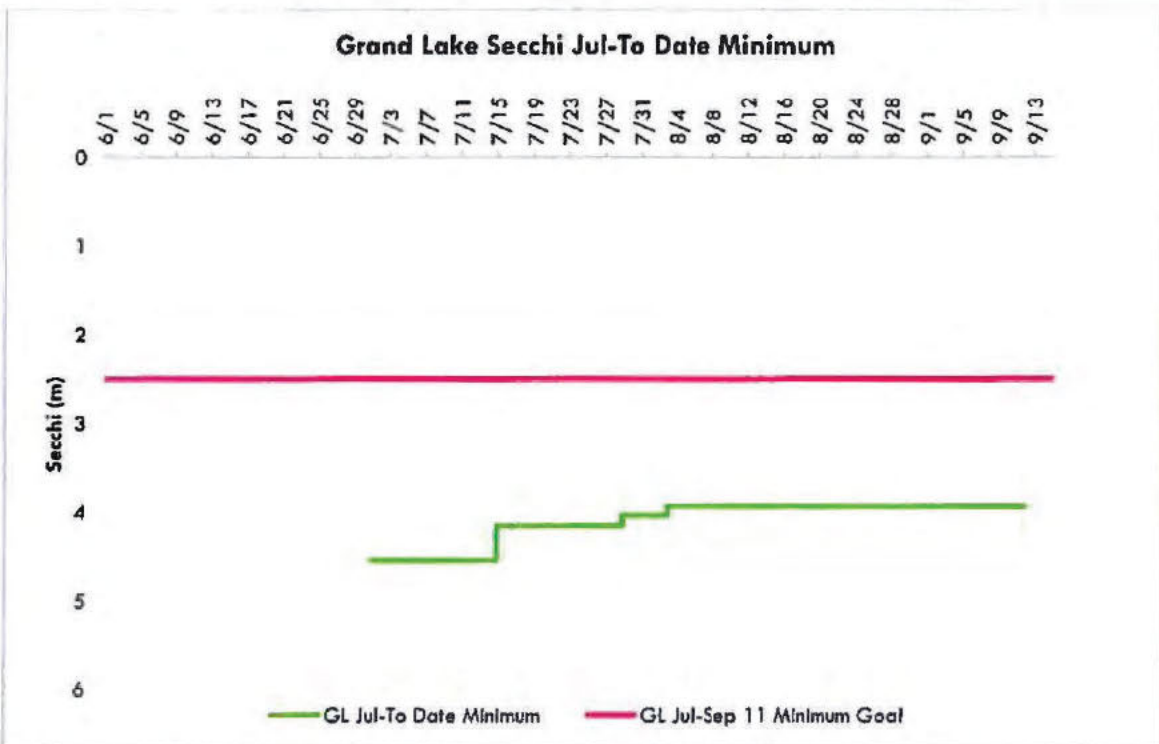


FIGURE 3 - GRAND LAKE SECCHI JUL-TO DATE MINIMUM

November 12, 2015

DISSOLVED OXYGEN (DO) AND PH MONITORING

Continuous (every 4 hour) real time monitoring of physical parameters is carried out at two sites in Shadow Mountain Reservoir. The real time monitoring includes DO concentration and percent saturation, temperature, pH, specific conductance and turbidity. Northern Water will make every effort to maintain these systems but adjustments may have to be made in the event of an equipment failure.

MONITORING LOCATIONS

Station	Description	Latitude	Longitude	Depth
SM-DAM	Shadow Mountain Reservoir near Dam	40.2101	-105.8421	7.6 m
SM-MID	Shadow Mountain Reservoir Mid Section	40.2252	-105.8378	6.7 m

SAMPLING EQUIPMENT AND MAINTENANCE

Buoy monitoring systems are currently located at the Shadow Mountain dam and middle sites (SM-DAM and SM-MID). Each buoy is equipped with a YSI 6820 multi-parameter sonde and is programmed to collect vertical profiles of temperature, D.O., specific conductance, pH and turbidity. The buoy systems are deployed after ice-off in the spring and then taken out in the fall prior to ice cover. When deployed, profiles will be collected every four hours at 0.5-meter increments down through the depth of the water column. Data will be logged and transferred by telemetry on a real-time basis.

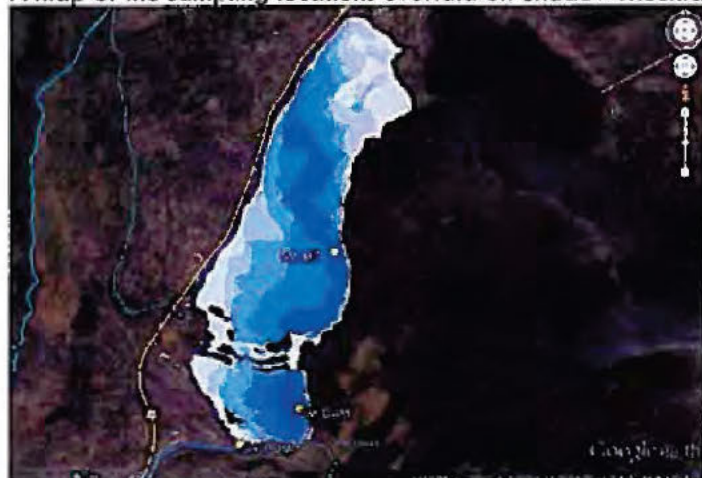


FREQUENCY

Profiles will be collected with the buoys at SM-DAM and SM-MID from mid-June until September 11; the sampling period may be longer or shorter depending on when the buoys are deployed and removed for the season.

MAP OF SAMPLING LOCATIONS

A map of the sampling locations overlaid on Shadow Mountain Reservoir bathymetry is shown below.



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EVALUATION OF WATER QUALITY INDICATORS

pH and DO will be reviewed using graphical representations such as contour plots and time series graphs presented in Figure 4, Figure 5, Figure 6 and Figure 7. Dissolved Oxygen percent saturation will be reported similarly.

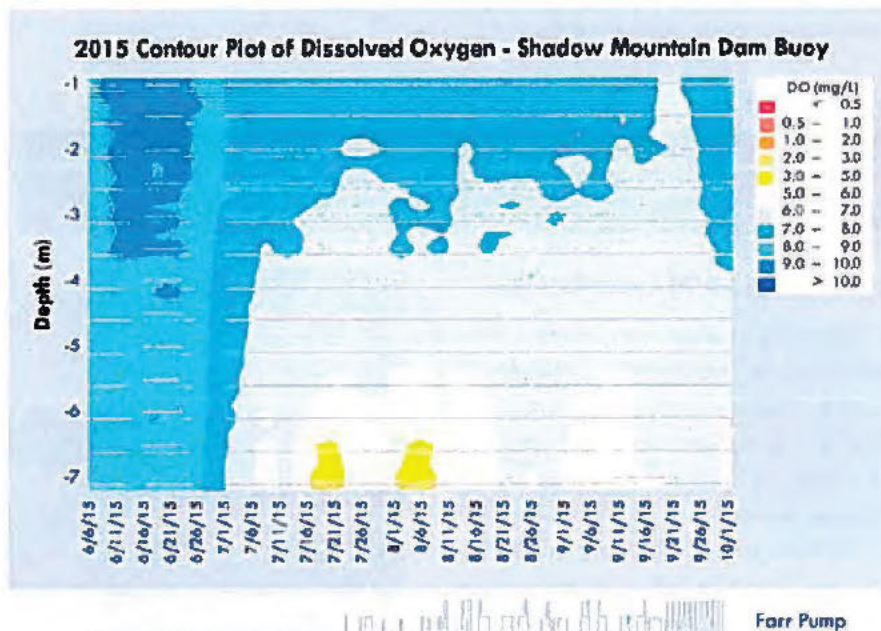


FIGURE 4 - DISSOLVED OXYGEN CONTOUR PLOT AT SHADOW MOUNTAIN DAM (2015)

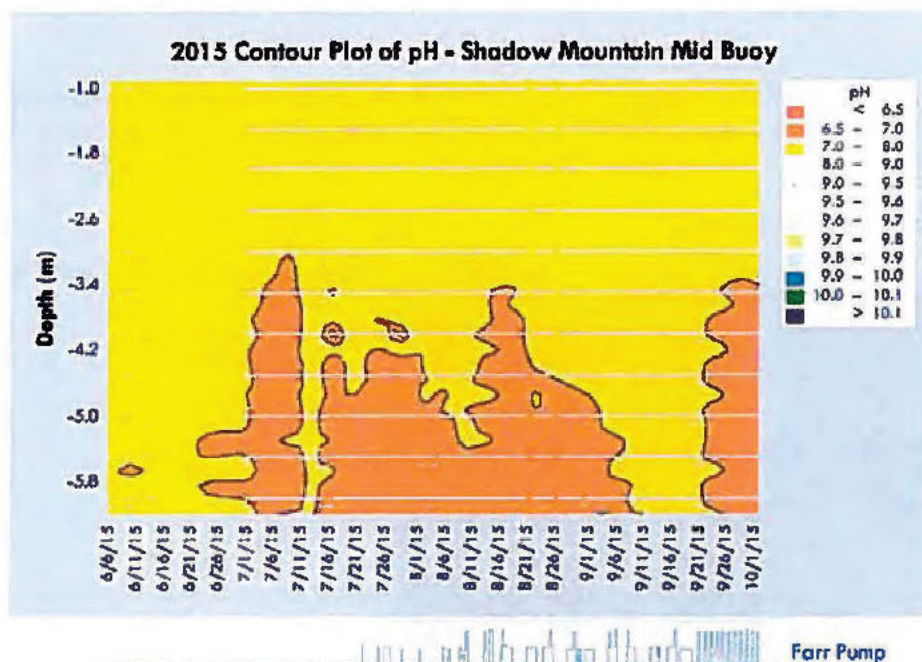


FIGURE 5 - PH CONTOUR PLOT AT SHADOW MOUNTAIN MID (2015)

November 12, 2015

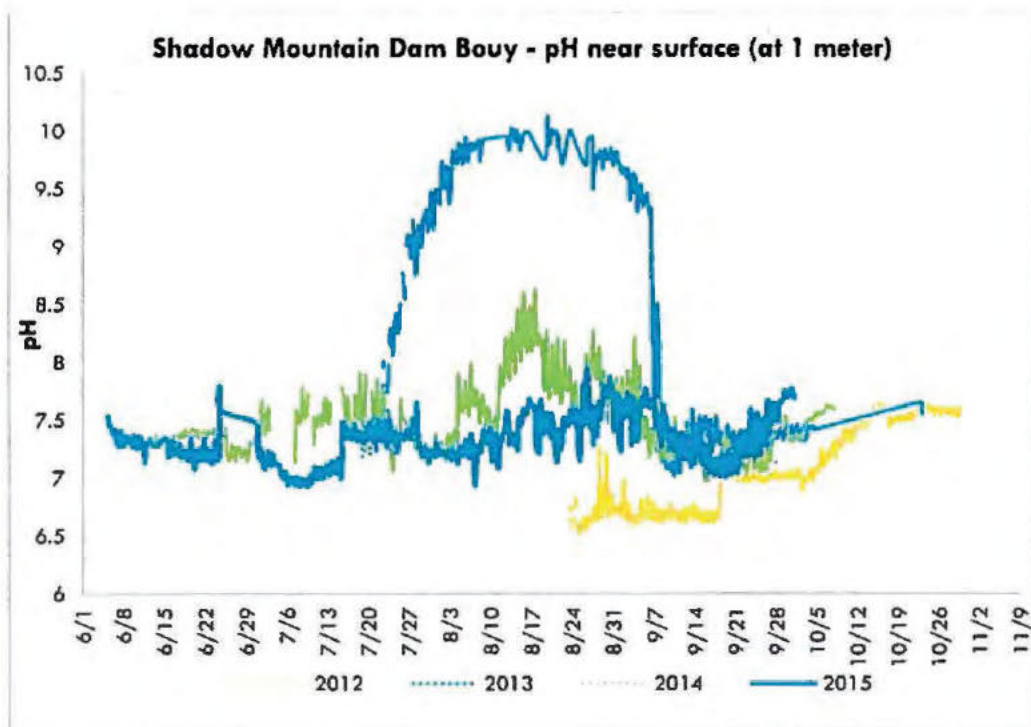


FIGURE 6 - SURFACE PH AT SHADOW MOUNTAIN DAM

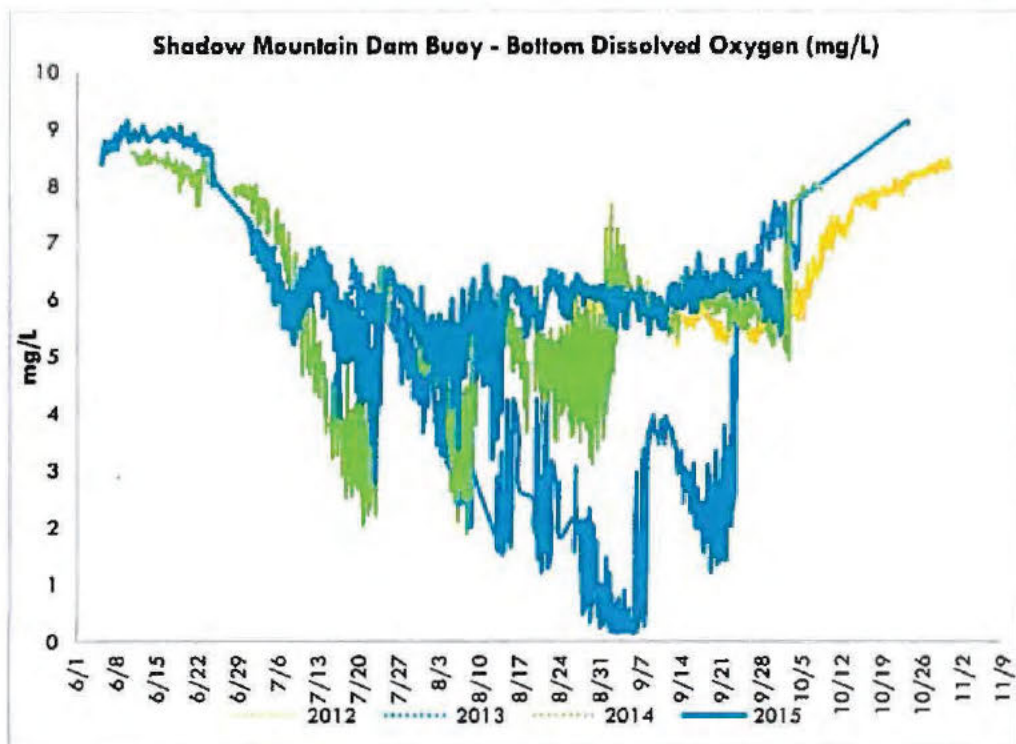


FIGURE 7 - BOTTOM DO AT SHADOW MOUNTAIN DAM

November 12, 2015

EXHIBIT B - GRAND LAKE ADAPTIVE MANAGEMENT WEEKLY SUMMARY FORM**Meeting Date:** XX/XX/2016**Attendees:**

	Northern Water	☐		Reclamation	☐		Larimer County	☐
	Northern Water	☐		Reclamation	☐		Town of Grand Lake	☐
	Northern Water	☐		Reclamation	☐		USFS	☐
	Northern Water	☐		Reclamation	☐		RMNP	☐
	Northern Water	☐		USGS	☐			☐
	Northern Water	☐		NWCCOG	☐			☐
	Grand County	☐		CRWCD	☐			☐
	Grand County	☐		WAPA	☐			☐

NOTES**Water Quality Indicators**

Current	Yes	No	Comments
GL avg Secchi < 3.8 m ?	☐	☐	
GL min Secchi < 2.5 m ?	☐	☐	
SM Surface pH > 8 ?	☐	☐	
SM Surface DO (%) > 100%?	☐	☐	
SM bottom DO < 3 mg/L ?	☐	☐	

Operational Parameters

Current	Forecast	Comments
Adams Tunnel Deliveries (cfs)	See graph	Source USBR
Big Thompson Deliveries (cfs)	Range	Source NW
Farr Pumping (cfs)	See graph	Source USBR
Shadow Mountain Releases (cfs)	Range	Source USGS Gage/NW
Upper Colorado Native Flow (cfs)	See graph	Source NW
Granby Res. Total Storage (af)	See graph	Source NW
Granby Res. Outflow (cfs)	See graph	Source NW

Climate Forecast (From HUP Report)

5-day Quantitative Precipitation Forecast (QPF): Chance for some light showers today, but overall expect a drying and warming trend through the weekend.

5 day qpf: <http://www.wpc.ncep.noaa.gov/qpf/p120i.gif?1445893642>

7 day qpf: <http://www.wpc.ncep.noaa.gov/qpf/p168i.gif?1445893676>

1-5 day minimum temperature anomaly forecast: <http://www.wpc.ncep.noaa.gov/medr/958wbg.gif>

1-5 day maximum temperature forecast: <http://www.wpc.ncep.noaa.gov/medr/95Awbg.gif>

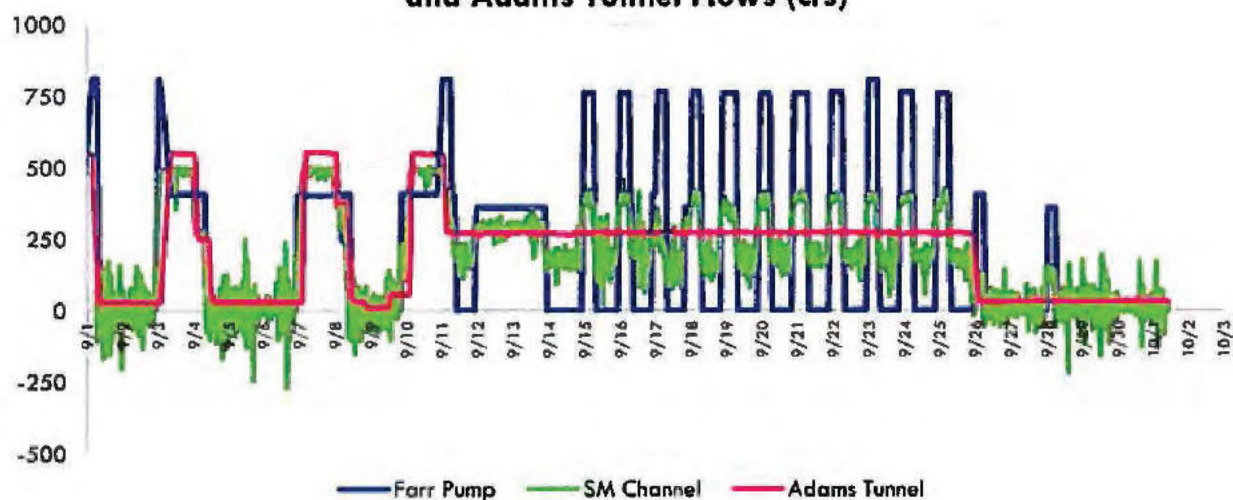
Precip forecast that goes into the CBRFC forecast. <http://www.cbrfc.noaa.gov/rmap/grid/index.php>

Action Items Summary:

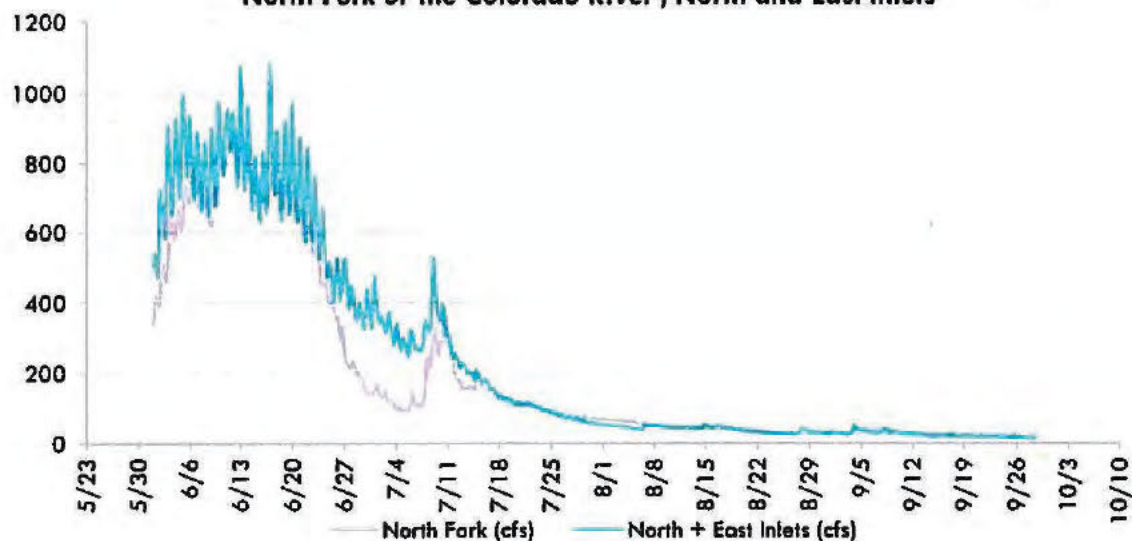
November 12, 2015

Observed Flows

Observed Farr Pumping, Shadow Mountain Channel and Adams Tunnel Flows (cfs)

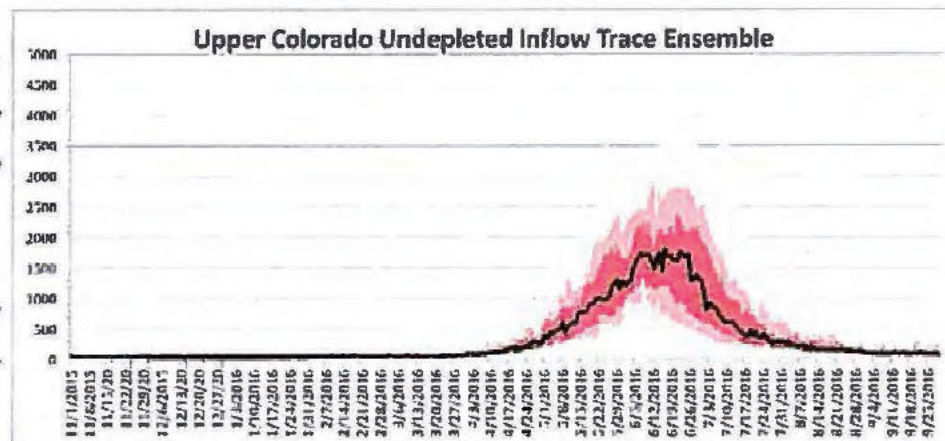
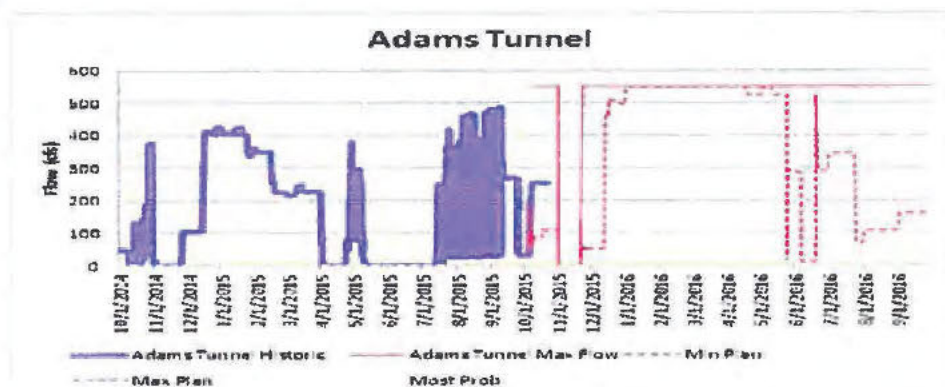


**Observed Grand Lake and Shadow Mountain Inflows
North Fork of the Colorado River , North and East Inlets**



November 12, 2015

Operational Forecast



11/1/2015

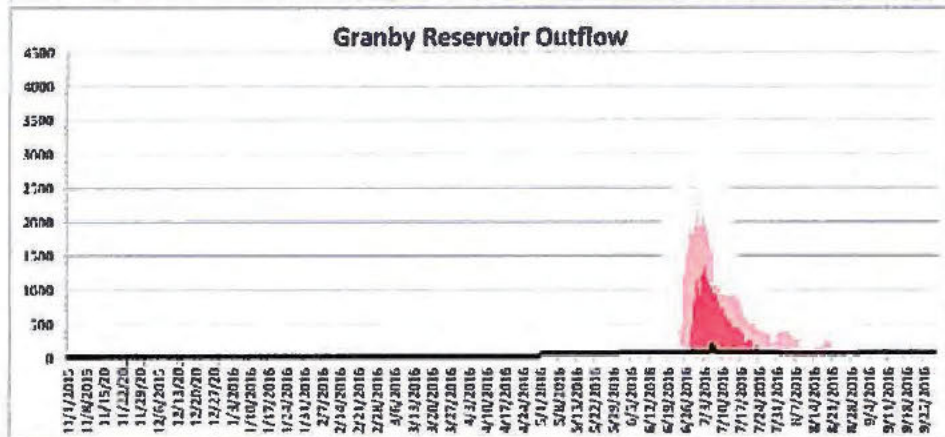
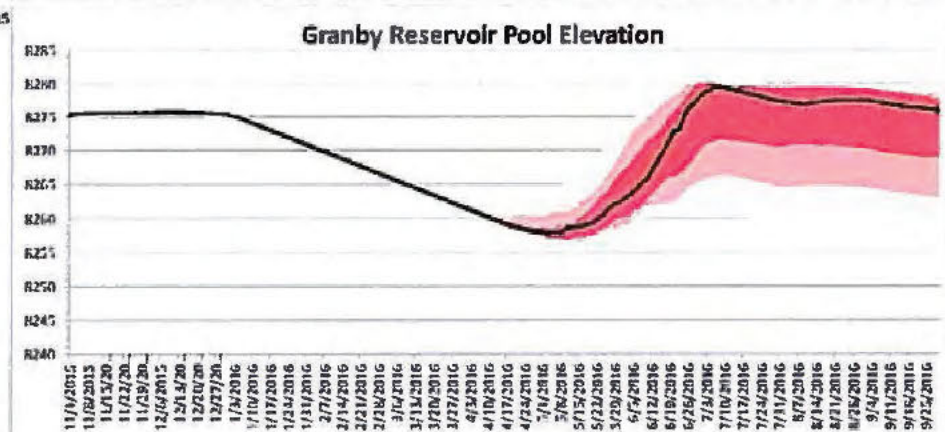
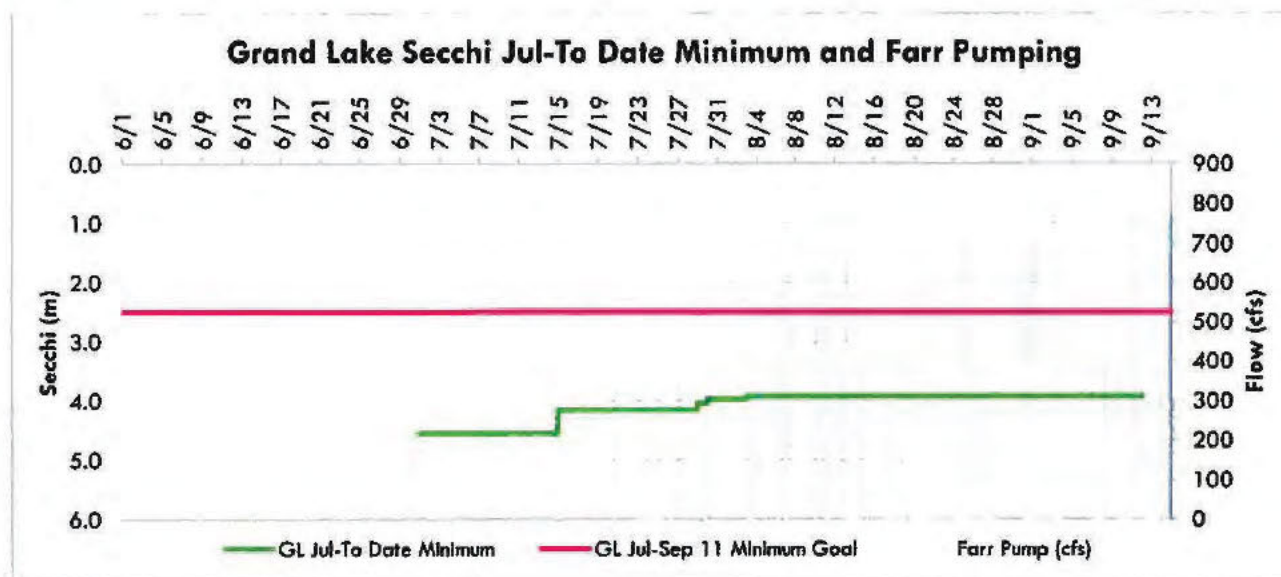
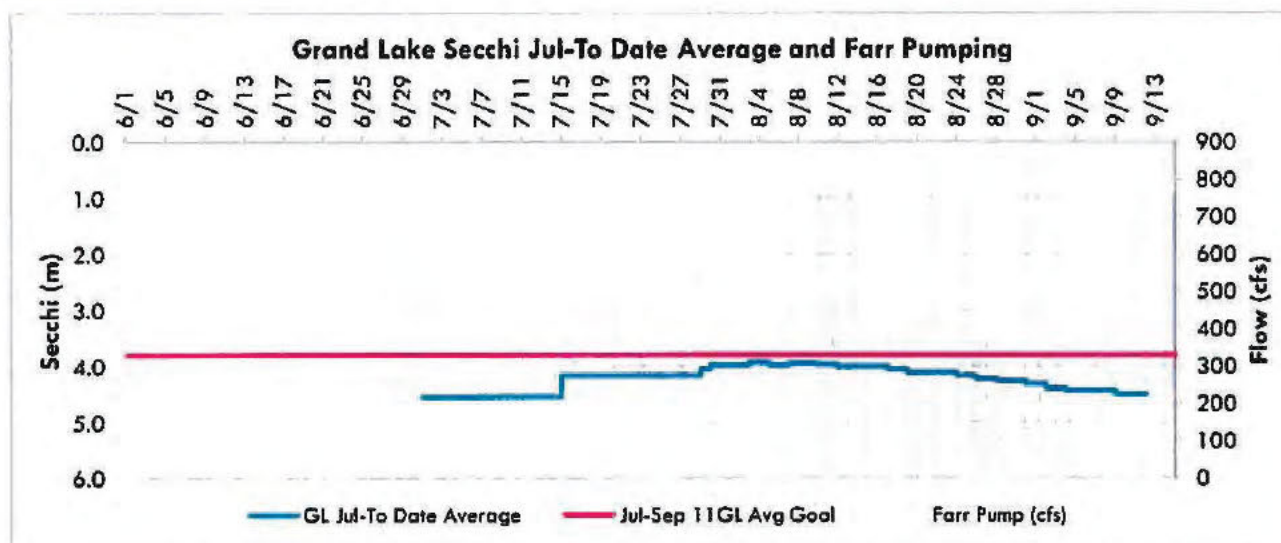


EXHIBIT B

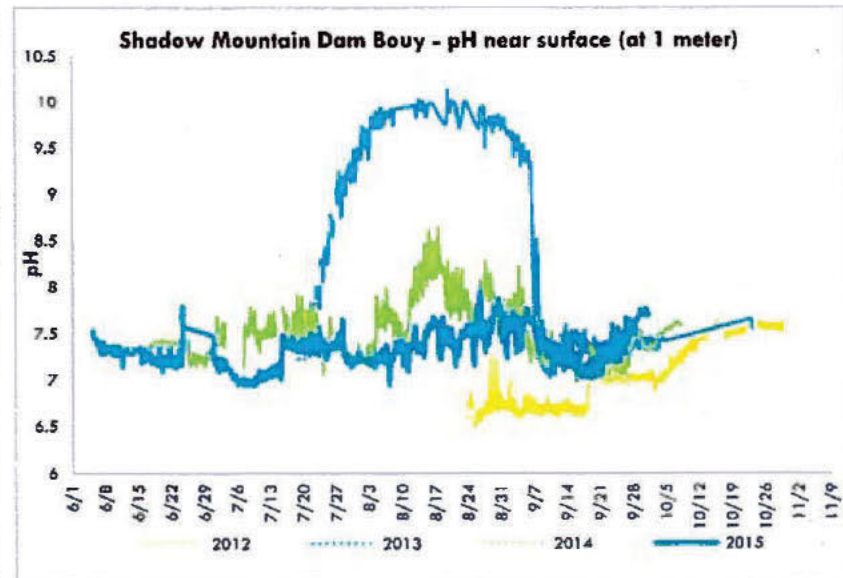
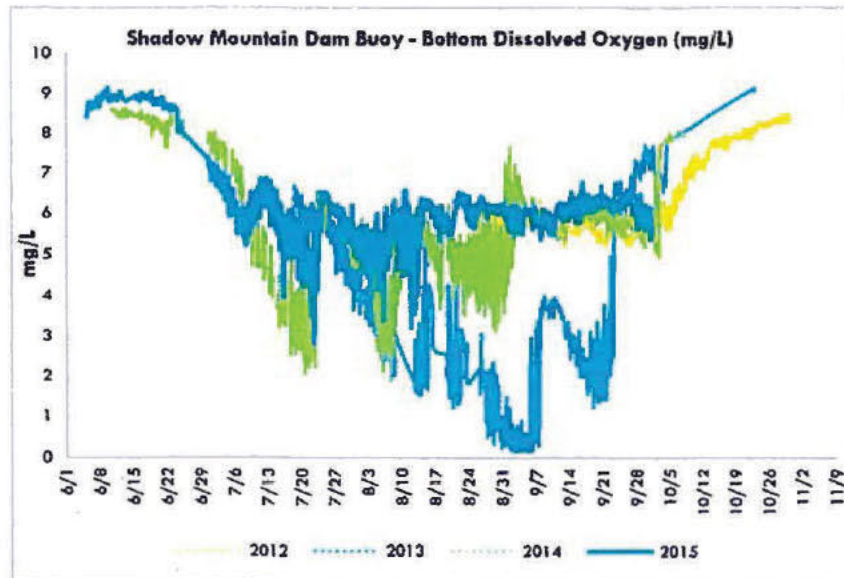
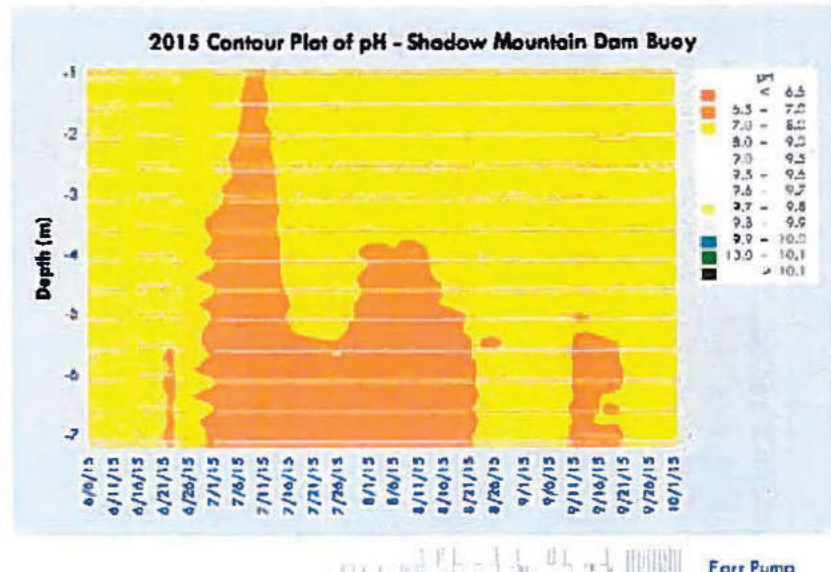
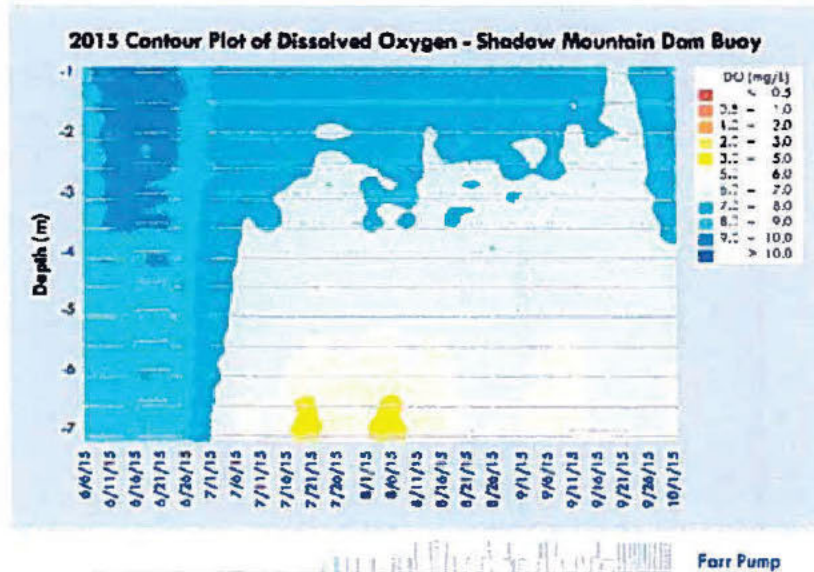
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November 12, 2015

Water Quality Summary



November 12, 2015



Appendix A

Three Lakes CLEAR Initiatives

This document provides a list of potential initiatives that may receive funding contributions from the Three Lakes CLEAR (Clarity, Legacy, Ecosystem, Adaptation, and Resilience) Fund, or “Three Lakes CLEAR,” in accordance with Section VII of the MOU. These initiatives are not listed in any order of priority, and may be pursued by the Parties or others independently without funding from Three Lakes CLEAR. This list may be updated from time to time upon mutual agreement of the MOU Parties without requiring any modification of the MOU.

- A. Piloting the management and harvesting of Mysis Shrimp in Grand Lake, with potential for establishing a long-term program.
- B. Managing aquatic plants in Shadow Mountain Reservoir.
- C. Converting septic systems to sewer within the Three Lakes Sanitation District.
- D. Implementing projects focused on watershed and stream health.
- E. Implementing projects focused on forest health.
- F. Managing sediment accumulation in Shadow Mountain Reservoir.
- G. Conducting a literature review of past experiences and research at Lake Tahoe.
- H. Grand Lake Operational Adaptive Management enhancements (such as operational flexibility improvements, special studies, tools development, and other actions beyond the scope of the current GLAM process).
- I. Forest and watershed health coalition building to strengthen local resources.
- J. Funding for the Kawuneeche Valley Restoration Collaborative (KVRC) to support project implementation including ungulate management.
- K. Stormwater infrastructure improvements.
- L. Reforestation and revegetation projects.
- M. Post-fire watershed restoration projects.
- N. Monitoring and maintenance of restoration and environmental enhancement projects.
- O. Mitigation of Grand Ditch impacts on the North Fork of the Colorado River.
- P. Mitigation and management of aquatic nuisance species.
- Q. Wastewater treatment facility upgrades.
- R. Provide support for revisions of local government land use codes to reduce nonpoint source pollution associated with land use and development.

The initiatives eligible for funding may change over time, with this list subject to updates or additions, provided that all initiatives remain aligned with Three Lakes CLEAR’s geographic scope and intended purpose.

Appendix B

Three Lakes CLEAR – Funding Process

This document summarizes the process for allocating funding from the Three Lakes CLEAR (Clarity, Legacy, Ecosystem, Adaptation, and Resilience) Fund, or “Three Lakes CLEAR,” as described in Section VII of the MOU. Three Lakes CLEAR will hold contributions provided exclusively by the Northern Colorado Water Conservancy District, Municipal Subdistrict, and Windy Gap Firming Project Water Activity Enterprise (collectively, “Northern Water”) provided on an annual basis throughout the 30-year duration of the MOU.

I. Purpose and Scope

Geographic Scope: Three Lakes CLEAR is intended to support additional clarity and watershed improvement projects within and upstream of the Three Lakes System, including Willow Creek and Fraser River watersheds.

Fund Purpose: The purpose of Three Lakes CLEAR is to support initiatives that improve clarity in Grand Lake and water quality and system health within and upstream of the Three Lakes.

Operation and Protection of the C-BT and Windy Gap Projects: Initiatives that protect source water, improve watershed and forest health, and enhance water quality sustain the integrity and long-term function of C-BT and Windy Gap infrastructure and the water supply those projects deliver.

Leveraging Funds: The Parties are encouraged to leverage Three Lakes CLEAR by supplementing or matching allocations with other funding sources from outside Northern Water, and to prioritize projects that demonstrate cost-sharing or co-investment from partners. Any funding provided by others will not be included as part of Three Lakes CLEAR but instead will be administered separately.

Appendix A to the MOU contains a list of potential initiatives that may be supported in whole or in part by Three Lakes CLEAR. The initiatives eligible for funding may change over time, with Appendix A subject to updates or additions upon agreement of the Parties, provided that all initiatives remain aligned with Three Lakes CLEAR’s geographic scope and intended purpose.

II. Three Lakes CLEAR Contributions

Northern Water agrees to contribute \$1,000,000 annually, for a total contribution of \$30,000,000 over the 30-year term of the MOU, for the purpose of implementing the collaborative initiatives described in Appendix A.

Three Lakes CLEAR will be comprised of “Cash Contributions” and a long-term “Reserve Fund.” In Year 1 of the MOU, 100 percent of the annual contribution will be made available as Cash Contributions to support the prompt initiation and completion of projects that enhance water quality within and upstream of the Three Lakes. Beginning in Year 2, annual contributions will be allocated between Cash Contributions and the Reserve Fund through a gradually transitioning schedule, with an increasing share directed to the Reserve Fund over time and a corresponding decrease in the portion available as Cash Contributions. By the final year of the MOU term, 100 percent of the annual contribution will be directed to the Reserve Fund. This shift happens incrementally each year, so that over the 30-year term of the MOU, \$20,000,000.00 will be allocated to the Cash Fund and \$10,000,000.00 to the Reserve Fund. See the attached table for an example of this contribution schedule.

The Reserve Fund is intended to establish a self-sustaining source of funding that supports continued watershed stewardship and water quality efforts beyond the initial 30-year MOU term. The Reserve Fund will remain inaccessible until 2047. After that point, the Governance Committee may choose to distribute funds from the Reserve Fund, but distributions will be limited to the annual investment returns generated by the Reserve Fund.

Upon expiration of the initial 30-year term of the MOU, the Reserve Fund and any unspent funds from the Cash Contributions will be available for continued use in accordance with the MOU, provided that the MOU is renewed or there is a subsequent long-term agreement in place approved by the Parties to continue the Grand Lake Adaptive Management framework and that addresses the distribution of Three Lakes CLEAR over time. Funds may also revert to the contributing entity under the circumstances identified in the MOU.

III. Governance

Three Lakes CLEAR will be managed by Northern Water. Distributions from Three Lakes CLEAR will be determined by a Governance Committee that consists of the Parties to the MOU. The Governance Committee shall be responsible for deciding how to distribute Three Lakes CLEAR in accordance with this Appendix B and selecting which initiatives identified on Appendix A will receive funding. The Governance Committee shall establish its own procedures and meeting schedule to undertake this work.

The Governance Committee, in its discretion, may create an Advisory Committee made up of other interested stakeholders to provide input on the identification, prioritization, and evaluation of potential initiatives, and additional fundraising opportunities to leverage Three Lakes CLEAR.

As stated in Section VII of the MOU, all decisions by the Governance Committee related to the distribution of moneys from Three Lakes CLEAR shall require a majority vote of the

Parties that includes the affirmative votes of the Northern Colorado Water Conservancy District, the Municipal Subdistrict, and the Windy Gap Firming Project Water Activity Enterprise. Such affirmative votes by the Northern Colorado Water Conservancy District, the Municipal Subdistrict, and the Windy Gap Firming Project Water Activity Enterprise shall only be required for decisions to distribute money from Three Lakes CLEAR.

FUND DISTRIBUTION EXAMPLE (2026 Dollars)

Year	Total Allocation (\$)	Cash Contribution (\$)	Reserves Contribution (\$)	Cumulative Cash Fund Contributions (\$)	Cumulative Reserve Fund Contributions (\$)
1	\$1,000,000	\$1,000,000	\$0	\$1,000,000	\$0
2	\$1,000,000	\$999,010	\$990	\$1,999,010	\$990
3	\$1,000,000	\$995,889	\$4,111	\$2,994,900	\$5,100
4	\$1,000,000	\$990,544	\$9,456	\$3,985,443	\$14,557
5	\$1,000,000	\$982,923	\$17,077	\$4,968,366	\$31,634
6	\$1,000,000	\$972,991	\$27,009	\$5,941,357	\$58,643
7	\$1,000,000	\$960,718	\$39,282	\$6,902,075	\$97,925
8	\$1,000,000	\$946,081	\$53,919	\$7,848,156	\$151,844
9	\$1,000,000	\$929,061	\$70,939	\$8,777,217	\$222,783
10	\$1,000,000	\$909,639	\$90,361	\$9,686,857	\$313,143
11	\$1,000,000	\$887,801	\$112,199	\$10,574,658	\$425,342
12	\$1,000,000	\$863,532	\$136,468	\$11,438,189	\$561,811
13	\$1,000,000	\$836,819	\$163,181	\$12,275,008	\$724,992
14	\$1,000,000	\$807,651	\$192,349	\$13,082,660	\$917,340
15	\$1,000,000	\$776,018	\$223,982	\$13,858,677	\$1,141,323
16	\$1,000,000	\$741,908	\$258,092	\$14,600,586	\$1,399,414
17	\$1,000,000	\$705,314	\$294,686	\$15,305,899	\$1,694,101
18	\$1,000,000	\$666,225	\$333,775	\$15,972,124	\$2,027,876
19	\$1,000,000	\$624,634	\$375,366	\$16,596,759	\$2,403,241
20	\$1,000,000	\$580,534	\$419,466	\$17,177,293	\$2,822,707
21	\$1,000,000	\$533,916	\$466,084	\$17,711,208	\$3,288,792
22	\$1,000,000	\$484,773	\$515,227	\$18,195,981	\$3,804,019
23	\$1,000,000	\$433,099	\$566,901	\$18,629,080	\$4,370,920
24	\$1,000,000	\$378,888	\$621,112	\$19,007,968	\$4,992,032
25	\$1,000,000	\$322,132	\$677,868	\$19,330,101	\$5,669,899
26	\$1,000,000	\$262,828	\$737,172	\$19,592,928	\$6,407,072
27	\$1,000,000	\$200,967	\$799,033	\$19,793,895	\$7,206,105
28	\$1,000,000	\$136,546	\$863,454	\$19,930,441	\$8,069,559
29	\$1,000,000	\$69,559	\$930,441	\$20,000,000	\$9,000,000
30	\$1,000,000	\$0	\$1,000,000	\$20,000,000	\$10,000,000