



SOUTHERN NEVADA  
WATER AUTHORITY

## Environmental Resources Division

# Delamar, Dry Lake, and Cave Valleys Biological Monitoring Plan 2013 Status and Data Report

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and the  
DDC Stipulation Executive Committee

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## 1.0 INTRODUCTION

This report was prepared by the Southern Nevada Water Authority (SNWA) in satisfaction of monitoring and reporting requirements set forth in the *Biological Monitoring Plan for the Delamar, Dry Lake and Cave Valley Stipulation* (Plan) (BRT, 2011). This report satisfies the biological reporting requirements of Nevada State Engineer (NSE) Rulings 6165-6167, which granted SNWA groundwater rights in the Delamar, Dry Lake, and Cave Valley Hydrographic Areas 180-182 (DDC) (NSE, 2012a-c). The location of DDC is presented in Figure 1-1.

This report also satisfies the biological reporting requirements of the 2008 Stipulated Agreement between SNWA and the U.S. Department of the Interior (DOI) regarding associated SNWA groundwater applications in DDC (Stipulation, 2008).

This report provides the NSE with the current status of the biological monitoring program, and is the second status report associated with the DDC biological monitoring, management and mitigation program. The reports document historic biological conditions and plan status since 2011 (SNWA, 2013).

### 1.1 Background

On January 7, 2008, prior to the initial NSE hearing for SNWA groundwater applications 53987-53992 in DDC, a Stipulation for Withdrawal of Protests (Stipulation, 2008) was established between SNWA and DOI on behalf of the Bureau of Indian Affairs, the Bureau of Land Management (BLM), the National Park Service, and the U.S. Fish and Wildlife Service (USFWS) (collectively known as the DOI Bureaus) regarding SNWA groundwater applications 53987-53992 in DDC. Exhibit A of the Stipulation requires the development of hydrologic and biological monitoring plans. As part of the Stipulation, an Executive Committee (EC) was established to oversee the implementation of the agreement. The Biologic Resources Team (BRT), composed of technical expert representatives of Parties to the Stipulation, was established to develop and oversee implementation of the biological monitoring, management and mitigation program, review program data, and modify the monitoring plan, if necessary. A hydrologic Technical Review Panel (TRP) was also established to oversee the development and implementation of the hydrologic monitoring, management and mitigation program.

On July 9, 2008, the NSE issued Ruling 5875 granting SNWA groundwater rights in DDC for municipal and domestic purposes under permits 53987-53992. As part of Ruling 5875, the NSE conditioned SNWA's groundwater rights upon biological and hydrologic monitoring and mitigation programs approved by the NSE (NSE, 2008 at page 40). Ruling 5875 required annual reports be submitted to the NSE detailing the findings of the approved monitoring and mitigation plans (NSE, 2008 at page 40). The *Hydrologic Monitoring and Mitigation Plan for Delamar, Dry Lake, and Cave*

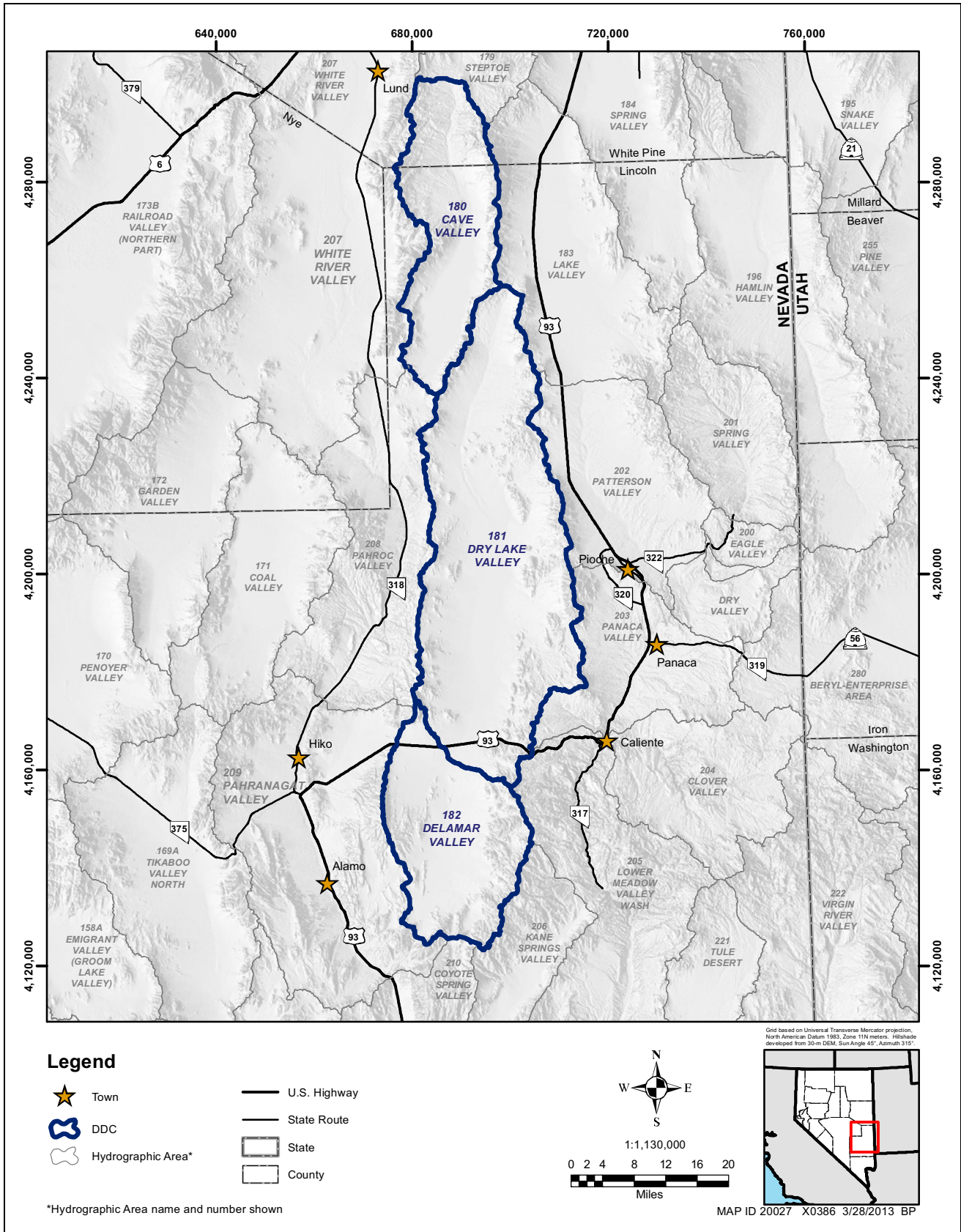


Figure 1-1  
Delamar, Dry Lake, and Cave Valley Hydrographic Areas 180-182 (DDC)



*Valleys* (SNWA, 2009) was approved by the NSE on December 22, 2009, and the hydrologic monitoring plan was implemented by SNWA in 2009.

Following the issuance of Ruling 5875, an opinion by the Nevada Supreme Court concluded that the NSE must re-notice SNWA's original groundwater applications and reopen the protest period (Great Basin Water Network, et. al. v. NSE, et. al., June 17, 2010) (Nevada Supreme Court, 2010). Ruling 5875 was vacated, and a second hearing on the water right applications was held by the NSE from September-November, 2011.

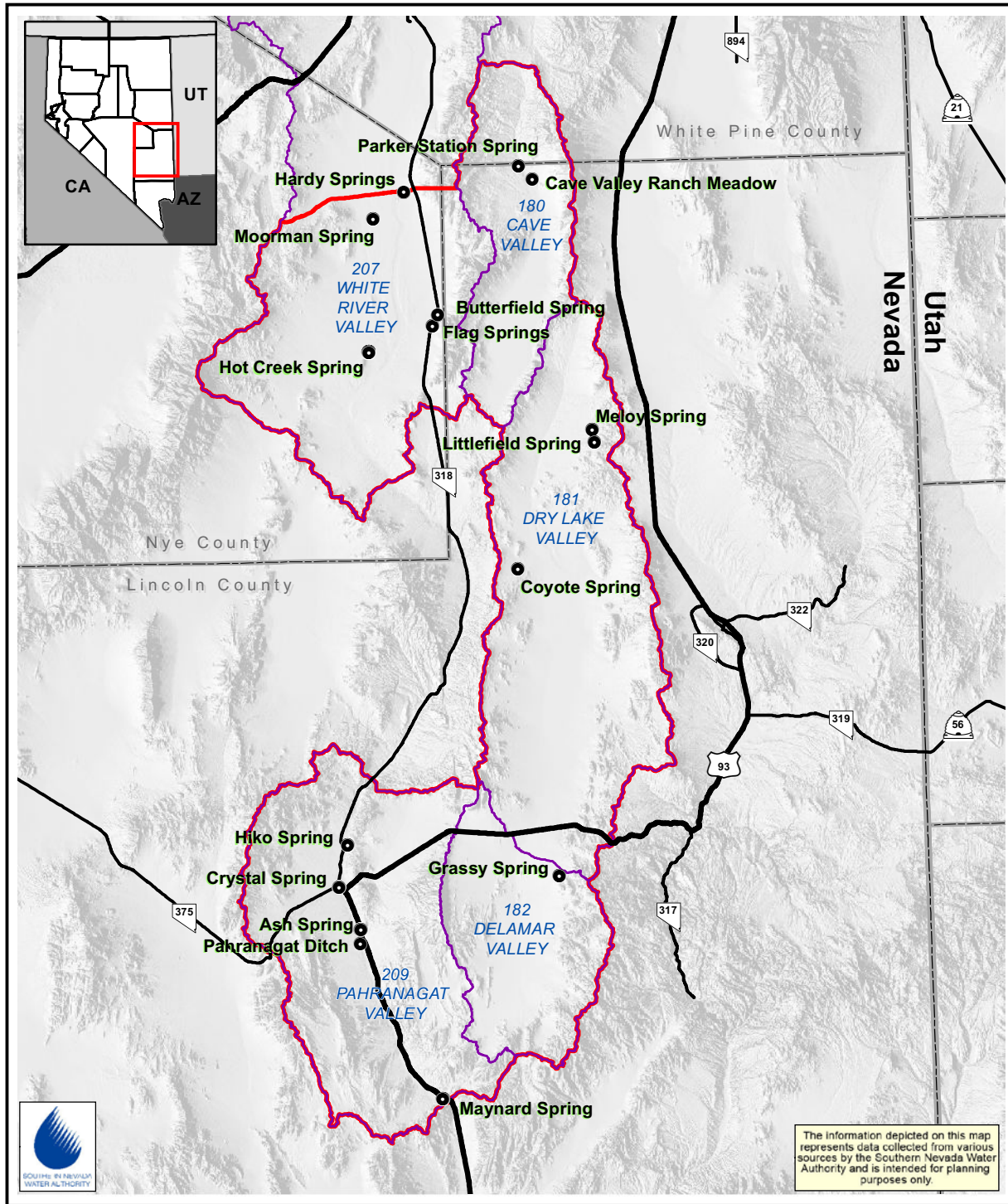
On March 22, 2012, the NSE issued Rulings 6165-6167 granting SNWA groundwater rights in DDC for municipal and domestic purposes under permits 53987-53992. As part of Rulings 6165-6167, the NSE reviewed and approved the Plan (BRT, 2011) and the updated *Hydrologic Monitoring and Mitigation Plan for Delamar, Dry Lake, and Cave Valleys* (SNWA, 2011), and conditioned SNWA's groundwater rights upon compliance with the plans and any amendments to the plans that the NSE requires at a later date pursuant to his authority under Nevada water law (NSE, 2012a at pages 169-170; NSE, 2012b at page 163; NSE, 2012c at page 161). Rulings 6165-6167 require that prior to SNWA exporting any groundwater resources from DDC, a minimum of two years of biological and hydrologic baseline data shall be collected by SNWA in accordance with the approved monitoring plans. Rulings 6165-6167 also required annual reports be submitted to the NSE detailing the findings of the approved monitoring plans (NSE, 2012a at pages 169-170; NSE, 2012b at page 163; NSE, 2012c at page 161).

## **1.2 Biological Monitoring, Management and Mitigation Program Status**

The Plan requires that three years of baseline biological data be collected prior to SNWA groundwater withdrawal from DDC (BRT, 2011). The monitoring sites identified in the Plan are located within the Stipulation Area of Interest, which encompasses DDC, southern White River Valley (Hydrographic Area 207), and Pahranaagat Valley (Hydrographic Area 209) (Stipulation, 2008). The biological monitoring sites and the Stipulation Area of Interest are depicted in Figure 1-2.

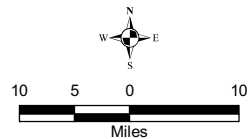
In accordance with the Plan, SNWA will initiate biological monitoring three years prior to projected SNWA groundwater withdrawal from DDC. Given the prediction of no effect to the DDC monitoring sites (which are in the mountain block), and the predicted lag time for any potential effects in White River or Pahranaagat Valleys as a result of SNWA groundwater withdrawal from DDC, the Plan is designed with a tiered monitoring approach. A basic suite of baseline biological data will be collected during the initial phases of monitoring, and efforts will be scaled up to more intensive baseline data collection ten years prior to predicted potential effects at any given monitoring site (using adaptive monitoring) (BRT, 2011).

The Plan integrates Nevada Department of Wildlife's (NDOW) regular and on-going monitoring of native fish populations, a program activity of the Nevada State's Native Aquatic Species Program (BRT, 2011 at page 5-21). Current fish monitoring efforts include: 1) White River springfish (*Crenichthys baileyi baileyi*) at Ash Spring; 2) Hiko White River springfish (*Crenichthys baileyi grandis*) at Hiko and Crystal springs; 3) White River spinedace (*Lepidomeda albivallis*) at Flag Springs; 4) White River speckled dace (*Rhinichthys osculus* spp.) at Butterfield Spring; 5) Moorman White River springfish (*Crenichthys baileyi thermophilus*) at Moorman and Hot Creek springs; and



- U.S. Highway
- State Route
- County
- State
- DDC Stipulation Area of Interest
- Hydrographic Basin
- BRT Monitoring Sites

Map ID 17297-3220 3/30/2010 RH



The information depicted on this map represents data collected from various sources by the Southern Nevada Water Authority and is intended for planning purposes only.

**Figure 1-2**  
**Biological Monitoring Sites and DDC Stipulation Area of Interest**

6) Pahrnagat roundtail chub (*Gila robusta jordani*) in the lower outflow channel of Ash Spring (Pahrnagat Ditch). To support Plan activities, and as a participant of the Pahrnagat Valley and White River Valley Native Fishes Recovery Implementation Teams (RIT), SNWA assists with these efforts. NDOW plans to continue routine fish sampling at these locations, which is often conducted on an annual or bi-annual basis (BRT, 2011 at page 5-21). Survey reports are available through NDOW.



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## 2.0 REFERENCES

- BRT (Biologic Resources Team). 2011. Biological Monitoring Plan for the Delamar, Dry Lake and Cave Valley Stipulation. January.
- Nevada Supreme Court. 2010. Great Basin Water Network v. State Engineer, 126 Nev., Ad. Op. No. 20. June 17, 2010.
- NSE (Nevada State Engineer). 2008. Ruling #5875, In the matter of applications 53987 through 53992, inclusive, filed to appropriate the underground waters of the Cave Valley, Dry Lake Valley and Delamar Valley hydrographic basins (180, 181, 182), Lincoln County, Nevada. July 9.
- NSE. 2012a. Ruling #6165, In the matter of applications 53987 and 53988 filed to appropriate the underground waters of the Cave Valley Hydrographic Basin (180), Lincoln County, Nevada. March 22.
- NSE. 2012b. Ruling #6166, In the matter of applications 53989 and 53990 filed to appropriate the underground waters of the Dry Lake Valley Hydrographic Basin (181), Lincoln County, Nevada. March 22.
- NSE. 2012c. Ruling #6167, In the matter of applications 53991 and 53992 filed to appropriate the underground waters of the Delamar Valley Hydrographic Basin (182), Lincoln County, Nevada. March 22.
- SNWA (Southern Nevada Water Authority). 2009. Hydrologic monitoring and mitigation plan for Delamar, Dry Lake, and Cave Valleys. Southern Nevada Water Authority, Las Vegas, Nevada. Doc. No. WRD-ED-0006. December.
- SNWA. 2011. Hydrologic monitoring and mitigation plan for Delamar, Dry Lake, and Cave Valleys. Southern Nevada Water Authority, Las Vegas, Nevada. Doc. No. WRD-ED-0011. June.
- SNWA. 2013. Spring Valley Biological Monitoring Plan 2011-2012 Status and Data Report. Southern Nevada Water Authority, Las Vegas, Nevada. March.
- Stipulation. 2008. Stipulation for Withdrawal of Protests: U.S. Bureau of Indian Affairs, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, Southern Nevada Water Authority, 2008. Regarding SNWA groundwater applications (#53987-53992) in Delamar, Dry Lake, and Cave Valley hydrographic areas (#180-182). January 9.



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