

Agenda

County of Inyo Board of Supervisors

Board of Supervisors Room
County Administrative Center
224 North Edwards
Independence, California

All members of the public are encouraged to participate in the discussion of any items on the Agenda. Anyone wishing to speak, please obtain a card from the Board Clerk and indicate each item you would like to discuss. Return the completed card to the Board Clerk before the Board considers the item (s) upon which you wish to speak. You will be allowed to speak about each item before the Board takes action on it.

Any member of the public may also make comments during the scheduled "Public Comment" period on this agenda concerning any subject related to the Board of Supervisors or County Government. No card needs to be submitted in order to speak during the "Public Comment" period.

Public Notices: (1) In Compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting please contact the Clerk of the Board at (760) 878-0373. (28 CFR 35.102-35.104 ADA Title II). Notification 48 hours prior to the meeting will enable the County to make reasonable arrangements to ensure accessibility to this meeting. Should you because of a disability require appropriate alternative formatting of this agenda, please notify the Clerk of the Board 72 hours prior to the meeting to enable the County to make the agenda available in a reasonable alternative format. (Government Code Section 54954.2). (2) If a writing, that is a public record relating to an agenda item for an open session of a regular meeting of the Board of Supervisors, is distributed less than 72 hours prior to the meeting, the writing shall be available for public inspection at the Office of the Clerk of the Board of Supervisors, 224 N. Edwards, Independence, California and is available per Government Code § 54957.5(b)(1).

Note: Historically the Board does break for lunch, the timing of a lunch break is made at the discretion of the Chairperson and at the Board's convenience.

November 17, 2015

8:30 a.m. 1. **PUBLIC COMMENT**

CLOSED SESSION

2. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION [Pursuant to Government Code §54956.9(d)(1)]** - CRYSTAL ALLEN, an individual v. COUNTY OF INYO, et al. a governmental entity; and DOES 1-50, Inyo County Superior Court Case No. SICVCV13-54820
3. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION [Pursuant to Government Code §54956.9(d)(1)]**. Bishop Paiute Tribe v. Inyo County; WILLIAM LUTZE, Inyo County Sheriff; THOMAS HARDY, Inyo County District Attorney; United States District Court Eastern District of California Court Case No. 1:15-CV-00367-JLT
4. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION [Pursuant to Government Code §54956.9(d)(1)]**. Patrick McLernon v. County of Inyo, William Kanayan as an individual, and dba William Kanayan Construction, and Does 1 to 25, inclusive; Inyo County Superior Court Case No. SICVCV 1558147
5. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION [Pursuant to Government Code §54956.9(d)(1)]** – Prominent Systems, a California Corporation, v. Eastern Sierra Engineering, P.C., a Nevada Corporation, County of Inyo, a political subdivision of the State of California, Superior Court of the State of California for the County of Los Angeles BC498144.
6. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION [Pursuant to Government Code §54956.9(d)(1)]** – Tanya Solesbee v. County of Inyo et al., United States District court, Eastern District No. 1:13-CV-01548 AWIJLT.
7. **CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION [Pursuant to Government Code §54956.9(d)(1)]** – Peter/Kathy Waasdorp v. County of Inyo; Skylene Katherine Milos; and Does 1-50 inclusive, Inyo County Superior Court Case No. SICVCV13-54910.
8. **CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION (Pursuant to Government Code §54956.9(d)(2)** – significant exposure to potential litigation (one case).
9. **CONFERENCE WITH LEGAL COUNSEL -ANTICIPATED LITIGATION [Pursuant to Government Code §54956.9(d)(4)]** - decision whether to initiate litigation (three case).
10. **CONFERENCE WITH LABOR NEGOTIATOR [Pursuant to Government Code §54957.6]** - Instructions to Negotiators re: wages, salaries and benefits - Employee Organization: Deputy Sheriff's Association (DSA) - Negotiators: County Administrative Officer, Kevin Carunchio, Assistant County Administrator Rick Benson, Deputy Personnel Director, Sue Dishion, and Information Services Director, Brandon Shults.

11. **CONFERENCE WITH LABOR NEGOTIATOR [Pursuant to Government Code §54957.6]** - Instructions to Negotiators re: wages, salaries and benefits - Employee Organization: Inyo County Peace Officers Association (ICPPOA) – Negotiators - County Administrative Officer, Kevin Carunchio, Assistant County Administrator, Rick Benson, Deputy Personnel Director, Sue Dishion, and Information Services Director, Brandon Shults.
12. **CONFERENCE WITH LABOR NEGOTIATOR [Pursuant to Government Code §54957.6]** - Instructions to Negotiators re: wages, salaries and benefits - Employee Organization: ICEA - Negotiators - County Administrative Officer, Kevin Carunchio, Assistant County Administrator, Rick Benson, Deputy Personnel Director, Sue Dishion, and Information Services Director, Brandon Shults.
13. **CONFERENCE WITH LABOR NEGOTIATOR [Pursuant to Government Code §54957.6]** - Instructions to Negotiators re: wages, salaries and benefits - Employee Organization: Law Enforcement Administrators' Association (LEAA) - Negotiators: - County Administrative Officer, Kevin Carunchio, Assistant County Administrator, Rick Benson, Deputy Personnel Director, Sue Dishion, and Information Services Director, Brandon Shults.
14. **REAL PROPERTY NEGOTIATIONS - CONFERENCE WITH REAL PROPERTY NEGOTIATOR (Pursuant to Government Code §54956.8)** – Property – APN010-490-08, Bishop, California – Negotiating Parties – County Administrator, Kevin Carunchio, Assistant County Administrator, Rick Benson, and Public Works Director, Clint Quilter, and Joseph Enterprises - Negotiating Parties, Steve Joseph, Scott Piercey, Wayne Lamb and Jeff Shepard – Negotiations – Terms and Conditions.

OPEN SESSION

10:00 a.m. PLEDGE OF ALLEGIANCE

15. **REPORT ON CLOSED SESSION AS REQUIRED BY LAW.**
16. **PUBLIC COMMENT**
17. **INTRODUCTION** – Grace McClenaghan, Child Support Specialist, will be introduced to the Board.

CONSENT AGENDA (Approval recommended by the County Administrator)

COUNTY ADMINISTRATOR

18. **Library** – Request Board authorize the closure of the Bishop, Big Pine, Independence, Furnace Creek, and Lone Pine Library branches on Saturday, November 28, 2015 because of the Thanksgiving Holiday. (Tecopa library to remain open.)

AUDITOR-CONTROLLER

19. Request Board A) declare MGT of American, Inc., a sole-source provider of mandated claims preparation services; and B) approve the Contract between the County of Inyo and MGT of American, Inc., for the preparation of the FY 2014-2015, 2015-2016 and 2016-2017 SB90 State Mandated Costs Claims, in an amount not to exceed \$25,350, contingent upon the Board's adoption of future budgets; and authorize the Chairperson to sign, contingent upon the appropriate signatures being obtained.

CLERK – RECORDER

20. Request Board issue an order accepting the Statement of All Votes Cast at the UDEL Election held November 3, 2015 and declare elected those offices according to the number of votes for each as shown on the Statement of All Votes Cast.

PUBLIC WORKS

21. Request Board approve the Plans and Specifications for the Ed Powers Bike Lane Project; and authorize the Public Works Director to advertise for bids for the project, contingent upon receipt of the State's authorization to proceed with construction.

22. Request Board approve the payment of \$42,000 to the National Park Service Exotic Plant Management Team as mitigation for emergency roadwork completed during the Gully Washer Emergency; and authorize the Public Works Director to sign all documents required pertaining to this payment, and transmit copies of the signed documents to the Clerk of the Board for the Board's files.

DEPARTMENTAL (To be considered at the Board's convenience)

23. **PUBLIC WORKS** – Request Board A) approve the Plans and Specifications for the Inyo County Jail HVAC Replacement Project; B) authorize the Public Works Director to advertise for bids for the Project; C) authorize the Public Works Director to award and approve the Contract for the Project if the bids received are within the project budget and authorize the Public Works Director to sign contingent upon the appropriate signatures being obtained, and transmit copies to the Clerk of the Board for the Board's files; and D) authorize the Public Works Director to sign all other documents, including change orders, to the extent permitted pursuant to Section 20142 of the Public Contract Code and other applicable law.
24. **PUBLIC WORKS – COUNTY COUNSEL** - Request Board A) direct the now County Counsel and continuing Risk Manager to sign the 2003 Standard District Lease approved by Board Order dated December 9, 2003; B) ratify the Lease effective December 9, 2003; C) authorize the Chairperson to sign the 2003 Lease; and D) approve an Amendment to the Lease, extending the term of the Lease through 2102 for a total of 99 years; and authorize the Chairperson to sign, contingent upon the appropriate signatures being obtained.
25. **PUBLIC WORKS – COUNTY COUNSEL** – Request Board approve the Resolution (a) correcting the February 17th, 2004 Board Order *nunc pro tunc* by adding a subparagraph B) the direction and authority to record the Town Water System Transfer Agreements (Agreements) with the Inyo County Clerk Recorder; (b) directing the Deputy Clerk of the Board to review and on finding the signature of Rene Mendez to be true, acknowledge the signature on each Agreement which attestation shall be treated as timely consistent with the *nunc pro tunc* correction; (c) authorizing that all paperwork and acts needed to record the Transfer Agreements shall be completed and may be signed by the County Administrator or designee to the extent further signatures are needed; and (d) authorizing the Chairperson to sign the resolution.
26. **PLANNING** – Request Board review the Draft Supplement to the U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada; review draft correspondence in regards thereto and if approved, authorize the Chairperson to sign.

TIMED ITEMS (Items will not be considered before scheduled time)

- 11:15 a.m. 27. **NOTIFICATION - BOARD OF EQUALIZATION MEETING** – The Board will convene as the Inyo County Board of Equalization (separate agenda.)
- 11:30 a.m. 28. **HEALTH AND HUMAN SERVICES – Mental Health Services** – Request Board A) conduct a **public hearing** to consider an ordinance titled “An Ordinance of the Board of Supervisors of the County of Inyo, State of California, Repealing Ordinance No. 1189 and Revising Inyo County Community Mental Health Services Fees;” which will amend the Community Mental Health Services Fees based on the annual certified actual costs; and B) waive the first reading of the ordinance and schedule the adoption for 11:30 a.m., Tuesday, November 24, 2015, in the Board of Supervisors Room, at the County Administrative Center, in Independence.
- 11:45 a.m. 29. **PLANNING** – Request Board A) conduct a **public hearing** on a resolution titled “A Resolution of the Board of Supervisors of the County of Inyo, State of California, Declaring the Vacation and Abandonment of that Portion of an Unnamed Road in the Community of Aspendell; and B) approve the resolution.

CORRESPONDENCE – ACTION (To be considered at the Board's convenience)

COMMENT (Portion of the Agenda when the Board takes comment from the public and County staff)

30. **COUNTY DEPARTMENT REPORTS** (Reports limited to two minutes)
31. **PUBLIC COMMENT**

BOARD MEMBERS AND STAFF REPORTS

CORRESPONDENCE - INFORMATIONAL



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only:
AGENDA NUMBER
 18

- Consent Departmental Correspondence Action Public Hearing
 Scheduled Time for Closed Session Informational

FROM: Inyo County Free Library
FOR THE BOARD MEETING OF: November 17, 2015
SUBJECT: Holiday Library Closure

DEPARTMENTAL RECOMMENDATION:

Request your Board authorize that Bishop, Big Pine, Independence, Furnace Creek, and Lone Pine Library branches close on Saturday, November 28, 2015 because of the Thanksgiving holiday. Tecopa Library will remain open.

SUMMARY DISCUSSION:

This request is made to allow library staff to spend Thanksgiving weekend with their families.

ALTERNATIVES:

If your Board does not authorize the requested closure, Bishop, Independence, Furnace Creek and Tecopa Library Branches will be open for the regularly scheduled Saturday hours after Thanksgiving. Big Pine and Lone Pine Branch will be closed due to staff absences.

OTHER AGENCY INVOLVEMENT: None

FINANCING: None

APPROVALS

COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by county counsel prior to submission to the board clerk.) N/A Approved: _____ Date _____
AUDITOR/CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.) N/A Approved: _____ Date _____
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.) N/A Approved: _____ Date _____

DEPARTMENT HEAD SIGNATURE: Nancy Masters Date: 11/6/15
 (Not to be signed until all approvals are received)
 (The Original plus 20 copies of this document are required)



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only:
AGENDA NUMBER

19

Consent Departmental Correspondence Action Public Hearing
 Schedule time for Closed Session Informational

FROM: Auditor-Controller

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Contract Services for SB90 State Mandated Costs Claim

DEPARTMENTAL RECOMMENDATIONS: Request the Board of Supervisors 1) declare MGT of America, Inc. a sole –source provider and 2) approve the contract between the County of Inyo and MGT of America, Inc. for the preparation of the FY 2014-2015, 2015-2016 and 2016-2017 SB90 State Mandated Costs Claims in an amount not to exceed \$25,350.00 and authorize the chairperson to sign, contingent upon the Board's adoption of future budgets and obtaining the appropriate signatures.

CAO RECOMMENDATION:

SUMMARY DISCUSSION: State mandated cost claims, originated from Senate Bill 90, Chapter 1406, Statutes of 1972. They were developed to limit the ability of local agencies and school districts to levy property taxes. To help local agencies and school districts make up for the shortfall in revenue, the State of California agreed to reimburse local agencies and school districts for the cost of new programs or increased levels of service mandated by State government.

Inyo County is eligible to receive reimbursement for mandated costs from the State of California. In fiscal year 2013-2014 MGT of America Inc., prepared approximately \$65,898.00 in requests for reimbursement on behalf of the County of Inyo. The claiming process for SB90 is very complex, time sensitive, and requires extensive schedules. MGT provided consulting services for state mandated reimbursement claims for twenty-one other counties and fifty of the State's larger cities. Because of the highly specialized nature of this program and experience that MGT of America, Inc. can provide, their consulting services are recommended to ensure maximum reimbursement from the State.

ALTERNATIVES:

OTHER AGENCY INVOLVEMENT: County Counsel has reviewed and approved the contract.

FINANCING: The costs of these services are in the fiscal year 2015-2016 Auditor-Controller Budget under Professional Services 5265.

APPROVALS

COUNTY COUNSEL:

AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by County Counsel prior to submission to the board clerk.)

Margaret Kemp Williams

Approved:

Date 10/22/15

AUDITOR/CONTROLLER

ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor/controller prior to submission to the board clerk.)

[Signature]

Approved:

Date 10/29/2015

PERSONNEL DIRECTOR

PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)

[Signature]

Approved:

Date

DEPARTMENT HEAD SIGNATURE:

(Not to be signed until all approvals are received)

Amy Shepherd

Date:

11/6/15

ATTACHMENT A

AGREEMENT BETWEEN COUNTY OF INYO
MGT of America

AND

State Mandated Cost Claim Preparation(SB90)

FOR THE PROVISION OF

SERVICES

TERM:

11/1/2015

06/30/2018

FROM:

TO:

SCOPE OF WORK:

Proposed Claiming Services, Deliverables & Due Dates

1. Any new and all annual claims for the County's 2014-2015 costs due during that are due during fiscal year 2015-2016. (File with SCO and due February 15, 2016) and for the next two subsequent years with due dates established by the State Controller's Office(SCO)

See Attached Proposal Letter.

Scope of Work Does not include Property Tax Admin Fee for the proposed contract period.

ATTACHMENT B

AGREEMENT BETWEEN COUNTY OF INYO
MGT of America

AND _____
State Mandated Cost Claim Preparation(SB90)

FOR THE PROVISION OF _____ **SERVICES**

TERM:
11/01/2015 06/30/2018
FROM: _____ **TO:** _____

SCHEDULE OF FEES:

Our fixed fees for the services listed above are as follows:

2014-2015 Annual and New Claims - \$8,450,

2015-2016 Annual and New Claims - \$8450,

2016-2017 Annual and New Claims - \$8450.

Indirect Cost Rates for the proposed years for Sheriff, Auditor Controller, Probation & Dist Attorney
(included with price above)



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

- Consent Departmental Correspondence Action Public Hearing
 Schedule time for Closed Session Informational

For Clerk's Use
Only:

AGENDA NUMBER

21

FROM: Public Works Department

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Adoption of the plans and special provisions for the Ed Powers Bike Lane Project, and approval to advertise for bids.

DEPARTMENTAL RECOMMENDATIONS: Request your Board to:

1. Adopt the plans and specifications for the Ed Powers Bike Lane Project; and
2. Authorize the Public Works Director to advertise for bids for the project, contingent upon receipt of the state's authorization to proceed with construction.

CAO RECOMMENDATION: N/A

SUMMARY DISCUSSION:

The Ed Powers Bike Lanes Project consists of widening the roadway, installing 4'-wide bicycle lanes on both sides of the roadway, painting bicycle lanes striping and marking, and installing bicycle lane signage on Ed Powers Road between Highway 395 and Highway 168.

Ed Powers Road is listed in the Inyo County Collaborative Bikeways Plan as a "High" priority project. This road serves as a link to several outlying rural neighborhoods with the downtown core of Bishop. The roads additionally connect to roads in the Round Valley area that provide excellent loop recreational ride possibilities.

The road will not be closed during construction. The contractor will provide for one-lane traffic control during portions of the work. The local radio stations will be requested to broadcast a Public Information Bulletin about the project prior to the start of construction, and the local residents and emergency response agencies will also be informed of the project. Construction area signs will be installed in the project vicinity to inform the travelling public of the project. The construction time for this project is anticipated to be approximately 30 working days.

The Public Works Department engineering staff has reviewed the plans and specifications. The Ed Powers Bike Lanes Project construction is both federally funded by the Regional Improvement Program and the Toll Credits Program. Due to escalating construction costs over time and extensive cultural studies and delineation required by the California Environmental Quality Act(CEQA) and the National Environmental Policy Act(NEPA), the Public Works Department staff has secured additional funding through the Local Transportation Commission - TEA Exchange Funds – up to \$140,000. These programs will reimburse the County for 100 percent of the construction costs, including construction engineering, for the Ed Powers Bike Lanes Project.

The scope of the project, due to funding constraints and escalated construction costs, has been separated into a base portion which is from US 395 to intersection with Red Hill Road, and an additive portion which is from the intersection of Red Hill Road to SR 168. The Public Works Department staff has been directed to identify possible funding for the additive portion or bike lanes on Red Hill Road, either would be connecting the exiting route to SR 168.

The Public Works Department engineering staff have reviewed the plans and specifications and the the Ed Powers Bike Lanes Project.

ALTERNATIVES:

Your Board could choose not to adopt the plans and specifications, and not to approve the project for advertising for bids and direct staff to find alternatives.

OTHER AGENCY INVOLVEMENT:

The auditor's office to make payments to the contractor after the contract is awarded
County counsel to review and approve contract documents.
Caltrans to reimburse the county for project costs as described below

FINANCING: The cost of the construction contract will be paid through budget unit 034601 State Funded Roads Projects, object code 5738, Ed Powers Bike Lanes, which is included in the 2015-2016 budget. \$927,386.00

This project is federally funded by the Regional Improvement Program utilizing the Toll Credits Program and the Local Transportation Commission TE Exchange funds. These programs will reimburse the County for 100 percent of the construction costs, including construction engineering, for the Ed Powers Bike Lanes Project.

APPROVALS	
COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by County Counsel prior to submission to the board clerk.)  Approved: <input checked="" type="checkbox"/> Date <u>11/10/15</u>
AUDITOR/CONTROLLER	ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor/controller prior to submission to the board clerk.)  Approved: <input checked="" type="checkbox"/> Date <u>11/12/2015</u>
PERSONNEL DIRECTOR	PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.) Approved: <u>N/A</u> Date _____

DEPARTMENT HEAD SIGNATURE:  Date: 11/12/15
(Not to be signed until all approvals are received)



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use
Only:
AGENDA NUMBER
22

- Consent Departmental Correspondence Action Public Hearing
 Schedule time for Closed Session Informational

FROM: Public Works Department

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Approve Payment of Mitigation Contribution of \$42,000 required by the California Department of Fish and Wildlife(CDFW) associated with emergency road work performed during the Gullywasher Emergency, and authorize Clint Quilter to execute the "permit" memorializing the agreement to pay.

DEPARTMENTAL RECOMMENDATIONS:

1. Authorize payment of \$42,000 to the National Park Service Exotic Plant Management Team as mitigation for emergency roadwork completed during the Gully Washer Emergency.
2. Authorize Clint Quilter to execute the related agreement.

CAO RECOMMENDATION:

SUMMARY DISCUSSION:

During the Gully Washer Emergency work was performed on a number of roadways. In eight instances this work occurred on CDFW-jurisdictional streambed. CDFW has determined that 3.0 acres of jurisdictional streambed was impacted and that the County must fund enhancement of approximately 9.0 acres of streambed habitat located within and adjacent to the Saline Valley Ecological Reserve. The amount of this funding has been determined by CDFW to be \$42,000.

This mitigation fee payment is not unusual and has been paid by the County on other roads and projects in the past. However, this particular instance combines a number of segments increasing the amount to a level that requires Board of Supervisor approval.

ALTERNATIVES:

1. Request additional information from staff.

OTHER AGENCY INVOLVEMENT:

California Department of Fish and Wildlife

FINANCING:

Expenditure from Budget Unit #034600-Road, Object Code 5265-Professional and Special Service. These funds are expected to be reimbursed as part of the Gully Washer Emergency.

Agenda Request Form

Board meeting of November 24, 2015

Subject: Approve Payment of Mitigation Contribution to California Department of Fish and Wildlife

APPROVALS

COUNTY COUNSEL: AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by County Counsel prior to submission to the board clerk.)
Approved: ✓ Date 11/08/15
Margaret Kemp-Williams

AUDITOR/CONTROLLER: ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor/controller prior to submission to the board clerk.)
Approved: yes Date 11/10/2015
[Signature]

PERSONNEL DIRECTOR: PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)
Approved: _____ Date _____

DEPARTMENT HEAD SIGNATURE: (Not to be signed until all approvals are received) *[Signature]* Date: 11/10/15



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard
Suite C-220
Ontario, CA 91764
(909) 484-0167
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director



June 11, 2015

Chantel Brown
Inyo County Public Works Department ("Permittee")
168 N. Edwards Street, P.O. Drawer Q
Independence, CA 93526

**Subject: Notification of Streambed Alteration No. 1600-2015-0040-R6
2013 Road Openings, Inyo County**

Dear Ms. Brown:

The California Department of Fish and Wildlife ("CDFW") received your Notification of Streambed Alteration and associated fees on March 3, 2015. Your Notification indicated that the Permittee had completed the Project described herein.

Pursuant to Fish and Game Code §1603, CDFW has determined that the Project could have substantially adversely affected existing wildlife resources and has included mitigation measures in this letter necessary to mitigate for those resources. The Permittee has reviewed this letter and accepts its terms and conditions.

PROJECT LOCATION:

The Project is located along eight (8) roadways, impacting ephemeral tributaries to Panamint Valley Playa, Saline Valley Playa, Owens Dry Lake, Salt Lake, and Lone Pine Creek, in the County of Inyo, State of California. Work locations, Public Land Survey data, and Geographic Information System (GIS) Maps are provided in Attachment A of the Notification Package. All work was completed within Inyo County right-of-way.

PROJECT DESCRIPTION:

The Project is limited to grading, removing debris, backfilling and compacting graded roadway, and culvert rehabilitation and replacement on roadways damaged by summer rainstorms in 2013. The Project began in July 2013 and was completed in March 2014. Ingress and egress occurred from existing, unpaved roadways. No sediment controls were employed during Project activities and sediment piles were not removed following the completion the Project. Equipment will be staged in paved or previously graded/disturbed areas located outside of CDFW jurisdiction. Water was not present in the Project area, and no work occurred in wet conditions (e.g. rain).

Construction activities associated with the Project include:

- Placement of 0.13 cubic yards of fill in 0.001 acres of CDFW-jurisdictional unvegetated streambed along Cerro Gordo Road;
- Placement of 18.4 cubic yards of fill in 0.07 acres of CDFW-jurisdictional unvegetated streambed along Death Valley Road near Crankshaft;
- Placement of 34.5 cubic yards of fill in 0.35 acres of CDFW-jurisdictional unvegetated streambed along Death Valley Road near Nunn Mountain;
- Restoration of 36 square feet of asphalt roadway, placement of 11 cubic yards of fill, and removal of 581 cubic yards of debris from one culvert, impacting in 0.1 acres of CDFW-jurisdictional vegetated streambed along Horseshoe Meadows Road;
- Placement of 46 cubic yards of fill in 0.004 acres of CDFW-jurisdictional unvegetated streambed along Olancho-Darwin Road;
- Placement of 607 cubic yards of fill in 2.25 acres of CDFW-jurisdictional unvegetated streambed along Saline Valley Road;
- Placement of 859 cubic yards of fill and the replacement of one culvert, impacting 0.44 acres of CDFW-jurisdictional unvegetated streambed along Waucoba Saline Road;
- Placement of three cubic yards of fill in 0.003 acres of CDFW-jurisdictional, vegetated streambed along Whitney Portal Road.

No best management practices were employed to prevent sediment from entering CDFW-jurisdictional habitats during streamflow events, and sediment piles were placed within active stream channels.

PROJECT IMPACTS:

Existing fish or wildlife resources the Project could have substantially adversely affected include:

BIRDS— golden eagle (*Aquila chrysaetos*), American kestrel (*Falco sparverius*), common raven (*Corvus corax*), Costa's hummingbird (*Calypte costae*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), horned lark (*Eremophila alpestris*), tree swallow (*Tachycineta bicolor*), violet-green swallow (*Tachycineta thalassina*), blue-gray gnatcatcher (*Poliophtila caerulea*), yellow-rumped warbler (*Dendroica coronate*), mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and other bird species.

MAMMALS– black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), coyote (*Canis latrans*), pocket gopher (*Thomomys bottae*), North American deermouse (*Peromyscus maniculatus*), *Dipodomys sp.*, *Myotis sp.*, and other mammal species

REPTILES– great basin collared lizard (*Crotaphytus bicinctores*), long-nosed leopard lizard (*Gambelia wislizenii*), western banded gecko (*Coleonyx variegatus variegatus*), desert iguana (*Dipsosaurus dorsalis dorsalis*), western zebra-tailed lizard (*Callisaurus draconoides rhodostriatus*), desert horned lizard (*Phrynosoma platyrhinos calidarium*), yellow-backed spiny lizard (*Sceloporus uniformis*), common side-blotched lizard (*Uta stansburiana elegans*), western fence lizard (*Sceloporus occidentalis*), Great Basin whiptail (*Aspidoscelis tigris tigris*), shovel-nosed snake (*Chionactis occipitalis*), glossy snake (*Arizona elegans*), red racer (*Coluber flagellum piceus*), desert striped whipsnake (*Coluber taeniatus taeniatus*), nightsnake (*Hypsiglena torquata nuchalata*), California kingsnake (*Lampropeltis californiae*), Great Basin gopher snake (*Pituophis catenifer deserticola*), long-nosed snake (*Rheinocheilus lecontei*), leaf-nosed snake (*Phyllorhynchus decurtatus*), Mohave patch-nosed snake (*Salvadora hexalepis*), Variable groundsnake (*Sonora semiannulata semiannulata*), California lyresnake (*Trimorphodon lyrophanes*), Mohave Desert sidewinder (*Crotalus cerastes cerastes*), Panamint rattlesnake (*Crotalus stephensi*).

PLANTS– creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), saltbush (*Atriplex*), cholla (*Cylindropuntia spp.*), sandmat (*Chamaesyce spp.*), hairy dalea (*Dalea mollissima*), cheesebush (*Ambrosia salsola*), devil's spineflower, (*Chorizanthe rigida*), Death Valley sandpaper-plant (*Petalonyx thurberi ssp. gilmanii*), Hoffman's buckwheat (*Eriogonum hoffmannii* var. *hoffmannii*), inland gilia (*Gilia interior*), and desert-winged rockcress (*Sibara deserti*), and other plant species.

The adverse effects the Project could have had on the wildlife resources identified above include the disturbance to, alteration of, and/or temporary loss of nesting or foraging habitat, and adverse impacts from alterations to geomorphic function downstream of the Project site. The Project resulted in permanent impacts to 3.0 acres of CDFW jurisdictional streambed habitat.

MITIGATION MEASURES:

To mitigate for the loss of 3.0 acres of CDFW-jurisdictional ephemeral streambed incurred from Project activities, the Permittee shall contribute **\$42,000** to fund the enhancement of approximately 9 acres of streambed habitat located within and adjacent to the Saline Valley Ecological Reserve by December 31, 2015. Inyo County is not responsible for future maintenance and monitoring for the habitat enhancement location. These funds shall be paid to the National Park Service Exotic Plant Management Team who will be responsible for implementing enhancement activities under the Bishop Lands North Program (CDFW) direction and oversight. The Bishop Lands North program shall be contacted via Alisa Ellsworth, Senior Environmental

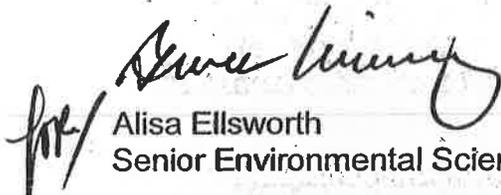
Ms. Chantel Brown
Inyo County Department of Public Works
Page 4 of 5

Scientist at Alisa.Ellsworth@wildlife.ca.gov. Enhancement activities would include the removal of trash and debris and ongoing removal and treatment of all non-native and invasive species, including salt cedar (*Tamarix sp.*). The National Park Service will be responsible for all enhancement activities for one season and shall submit a report once activities are completed. This report shall be sent to Nick Buckmaster, Environmental Scientist at Nick.Buckmaster@wildlife.ca.gov.

CDFW appreciates Inyo County submitting a notification of streambed alteration following the completion of the above described Project; however, please note that per Fish and Game Code §1602, notification needs to be submitted prior to the initiation of Project activities for non-emergency Projects, and within 14 days of the completion of Project activities in an emergency Project. Failure to notify CDFW prior to the initiation of future Project activities is a violation of Fish and Game Code §1600, and may result in CDFW pursuing enforcement options.

If you have any questions regarding this matter, please Nick Buckmaster at (760) 872-1110 or Nick.Buckmaster@wildlife.ca.gov.

Sincerely,


Alisa Ellsworth
Senior Environmental Scientist

cc: Nick Buckmaster, CDFW
Susanne Heim, Panorama Environmental
Tania Treis, Panorama Environmental
Chron

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR INYO COUNTY PUBLIC WORKS DEPARTMENT


Clint Quilter
Public Works Director


Date

*Ms. Chantel Brown
Inyo County Department of Public Works
Page 5 of 5*

The undersigned acknowledges that all mitigation funds identified in this letter have been paid in full.

FOR DEPARTMENT OF FISH AND WILDLIFE

Bruce Kinney
Acting Environmental Program Manager

Date

Prepared by: Nick Buckmaster
Environmental Scientist



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

- Consent Departmental Correspondence Action Public Hearing
 Schedule time for Closed Session Informational

For Clerk's Use
Only:

AGENDA NUMBER

23

FROM: Public Works

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Inyo County Jail HVAC Replacement Project

DEPARTMENTAL RECOMMENDATION:

Request your Board 1) approve the plans and specifications for the Inyo County Jail HVAC Replacement Project; 2) authorize the Public Works Director to advertise and bid the project; 3) authorize the Public Works Director to award the project if bids received are within the project budget and sign all contract documents, contingent upon the appropriate signatures being obtained, including change orders, to the extent permitted pursuant to Section 20142 of the Public Contract Code and other applicable laws.

CAO RECOMMENDATION: None

SUMMARY DISCUSSION:

The Inyo County Jail Building currently has thirteen (13) HVAC units on the roof, providing the building with air conditioning and heating. Most of these units are very old and beyond the end of their 15-20 year service life. These old units have become increasingly burdensome to the County maintenance crew due to constant breakdown's and repairs.

Great Basin Unified Air Pollution Control District (GBUAPCD) has provided Inyo County with funding to replace three (3) of these HVAC units as part of the Environmental Public Benefit Fund Program to reduce air pollution emissions in Inyo County. Public Works desires to replace the three (3) units that GBUAPCD has provided funds for and, in addition, replace four (4) other units also in need of replacement.

Replacement of the seven (7) HVAC units would greatly enhance the reliability of the Jail HVAC units and reduce the burden to the County Building Maintenance Staff. It would also create a more comfortable environment for the employees and inmates of the jail, reduce measurable amounts of air pollution in the Owens Valley Planning Area and beyond, and would result in long-term energy savings for the County.

ALTERNATIVES:

Not approve the plans, specifications, and advertisement of the project. This is not recommended, as the existing HVAC units are nearing the end of their service life, expensive to operate and require constant maintenance.

OTHER AGENCY INVOLVEMENT:

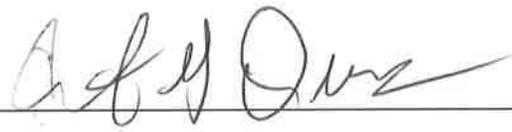
County Counsel Review the ARF and Bid Package

FINANCING: Funding will be provided from Great Basin APC Grant Budget Unit 610189, Object Code 5650, Structures and Improvements in the amount of \$40,900.00 for replacement of three (3) HVAC units. The other four (4) units would be funded with \$50,600 from the Public Works Deferred Maintenance Budget Unit 011501, Object Code 5640, Structures and Improvements.

APPROVALS

COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by county counsel prior to submission to the board clerk.)  Approved: <input checked="" type="checkbox"/> Date: 10/30/15
AUDITOR/CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.)  Approved: <u>yes</u> Date: 11/5/2015
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.) Approved: _____ Date: _____

DEPARTMENT HEAD SIGNATURE:
(Not to be signed until all approvals are Received)



Date: 11/10/15



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only: AGENDA NUMBER 24
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- Consent Departmental Correspondence Action Public Hearing
 Scheduled Time for Closed Session Informational

FROM: Public Works and County Counsel

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: December 9, 2003 Lease with Starlight Community Service District and Term Amendment

DEPARTMENTAL RECOMMENDATION: Request that your Board 1) direct the now County Counsel and Continuing Risk Manager to sign the 2003 Standard District Lease approved by Board Order dated December 9, 2003; 2) ratify the Lease effective December 9, 2003; 3) authorize the Chairperson to sign the 2003 Lease; 4) Amend the term of the Lease to extend through 2102 [99 years total]; and 5) authorize the Chairperson to sign the Amended Lease contingent upon obtaining appropriate signatures.

SUMMARY DISCUSSION: By Board Order dated December 9, 2003 your Board approved a forty (40) year "Standard County Lease with Special Districts" between the Starlight Estates Community Service District (District) and the County (Lease). The Lease when presented to your Board had the signature of the representative of the District, Dan Tothoroh, the County Lease Administrator and the County Auditor. The Lease had been approved on the ARF by the County Counsel's Office.

For some unknown reason the signatures of the County Counsel and the Risk Manager were not obtained on the Lease before submission to your Board, even though the Lease was signed by the District, and as a consequence the ministerial act of having the Board Chair sign the Lease did not occur. Moreover, the original lease is not available; however, a copy can serve in the stead of the original. [A copy of the Board Order and Lease is attached hereto for use.] This situation is not attributable to the District.

This is a standard lease with blanks to be filled in and was approved by the County Counsel's Office on the ARF. To rectify this mistake and move forward with the unanimous intent of your Board as reflected in the Board Order dated December 9, 2003 and the expectations of the District, the Board is asked to direct the now County Counsel and continuing Risk Manager to sign the form Lease and to ratify the Lease per the Board Order dated December 9, 2003 with the current Chair signing the Lease to memorialize this transaction.

Moreover, the maximum term for this Lease is ninety (99) years. Government Code § 25521. Due to the delay occasioned through no fault of the District and the District's desire to build a structure on the property to serve the Community's needs at a cost in excess of \$100,000.00, the District is seeking an amendment to the Lease to extend the term to 2102, the full term allowed by law.

ALTERNATIVES: .

OTHER AGENCY INVOLVEMENT: County Counsel

FINANCING: None.

APPROVALS

COUNTY COUNSEL: <i>yes</i>	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by county counsel prior to submission to the board clerk.) <i>Margaret Kemp Wellings</i> Approved: <u><i>yes</i></u> Date <u><i>11/12/15</i></u>
AUDITOR/CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.) <i>/</i> Approved: _____ Date _____
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.) <i>/</i> Approved: _____ Date _____

DEPARTMENT HEAD SIGNATURE:
(Not to be signed until all approvals are received) *Clint Quilter by Hayden* Date: *11-12-15*

**AMENDMENT NUMBER ONE TO
STANDARD LEASE AGREEMENT BETWEEN THE COUNTY OF INYO AND
STARLITE COMMUNITY SERVICES DISTRICT FOR THE USE OF COUNTY-OWNED LAND FOR A
COMMUNITY SERVICE BUILDING**

WHEREAS, the County of Inyo (hereinafter referred to as "County") and Starlite Community Service District of Bishop (hereinafter referred to as "Lessee"), have entered into an Agreement for the lease of County owned land, on County of Inyo Standard Lease Agreement Form, for the term from July 1, 2003 to June 30, 2043.

WHEREAS, County and Lessee do desire and consent to amend such Agreement as set forth below;

WHEREAS, such Agreement provides that it may be modified, amended, changed, added to, or subtracted from, by the mutual consent of the parties thereto, if such amendment or change is in written form, and executed with the same formalities as such Agreement, and attached to the original Agreement to maintain continuity.

County and Lessee hereby amend such Agreement as follows:

Amend the term of the Lease to extend through 2102 [99 years total];

The effective date of this Amendment to the Agreement is _____.

All the other terms and conditions of the Agreement are unchanged and remain the same.

**AMENDMENT NUMBER ONE TO
STANDARD LEASE AGREEMENT BETWEEN THE COUNTY OF INYO AND
STARLITE COMMUNITY SERVICES DISTRICT FOR THE USE OF COUNTY-OWNED LAND FOR A
COMMUNITY SERVICE BUILDING**

IN WITNESS THEREOF, THE PARTIES HERETO HAVE SET THEIR HANDS AND SEALS THIS
____ DAY OF _____, _____.

COUNTY OF INYO

By: _____

Dated: _____

LESSEE

By: _____
Signature

Type or Print

Dated: _____

APPROVED AS TO FORM AND LEGALITY:



County Counsel

APPROVED AS TO ACCOUNTING FORM:

County Auditor

APPROVED AS TO PERSONNEL REQUIREMENTS:

Personnel Services

APPROVED AS TO RISK ASSESSMENT:

County Risk Manager

In the Rooms of the Board of Supervisors

County of Inyo, State of California

I, HEREBY CERTIFY, that at a meeting of the Board of Supervisor of the County of Inyo, State of California, held in their rooms at the County Administrative Center in Independence on the 9th day of *DECEMBER, 2003*, an order was duly made and entered as follows:

P.W./Starlite
Lease

Moved by Supervisor Arcularius and seconded by Supervisor Williams to A) find that certain County-owned property in the Community of Starlite Estates is not required for County use; B) approve the Lease Agreement for that property with the Starlite Community Services District at no charge for the purposes of constructing a community services building; and C) approve the term of the lease from July 1, 2003, through June 30, 2043 (40 years), and authorize the Chairperson to sign, contingent upon the appropriate signatures being obtained. Motion carried unanimously.

WITNESS my hand and the seal of said Board this 9th

Day of DECEMBER 2003



RENÉ L. MENDEZ

Clerk of the Board of Supervisors

By

Patricia Gunsolley

Patricia Gunsolley, Assistant

Routing
CC
Purchasing
Personnel
Auditor <input checked="" type="checkbox"/>
CAO
Other P.W.
DATE December 17, 2003



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use
Only:

AGENDA NUMBER

18

Consent Departmental Correspondence Action
Public Hearing Schedule time for Closed Session Informational

FROM: Public Works

FOR THE BOARD MEETING OF: December 9, 2003

SUBJECT: Lease Agreement with Starlite Community Services District for County owned Property in Starlite Estates.

DEPARTMENTAL RECOMMENDATIONS:

1. Recommend that your Board find that certain County-owned property in the community of Starlite Estates is not required for County use; and
2. Recommend that your Board approve a Lease Agreement for that property with the Starlite Community Services District at no charge, for the purposes of constructing a community services building; and
3. Approve the term of this lease from July 1, 2003 to June 30, 2043 (40 years) and authorize the Chairperson to sign the Lease Agreement contingent upon obtaining the appropriate signatures (4/5ths vote required).

CAO RECOMMENDATIONS:

SUMMARY DISCUSSION:

As your Board may be aware, the County currently owns property in Starlite Estates that has been developed as the Community Park. This property was deeded to the County as part of the conditions of subdivision in the original development. This being said, with the final installation of the playground equipment the County no longer has plans to improve what remains of the original parcel. Upon a request by the Starlite Community Services District (District), the Public Works Department with the assistance of Counsels Office initiated and finalized the proposed Lease Agreement.

The recommendation above will allow the District an opportunity to construct a Community Services building on County owned property in Starlite Estates. This building may be used in conjunction with current District uses, and in the event that the District is empowered with fire suppression services it will provide them with the opportunity to use the building for that purpose as well.

ALTERNATIVES:

Your Board could choose to not enter into the lease agreement with the District. This is not being recommended, as the proposed building is extremely important to the operations of the District.

OTHER AGENCY INVOLVEMENT:

County Counsel will review the agreement as to legal form and the Public Works Department will oversee the terms and conditions of the agreement.

FINANCING:

None.

APPROVALS

COUNTY COUNSEL: AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by County Counsel prior to submission to the board clerk.)

Approved: Alh Barry Date 11/24/03

AUDITOR/CONTROLLER ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor/controller prior to submission to the board clerk.)

Approved: Peggy Petropoulos Date 11/25/03

PERSONNEL DIRECTOR PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)

Approved: _____ Date _____

DEPARTMENT HEAD SIGNATURE:

(Not to be signed until all approvals are received)

Michael S. Miller Date: 11/25/03

**LEASE BETWEEN THE COUNTY OF INYO AND THE
STARLITE COMMUNITY SERVICES DISTRICT FOR THE USE OF COUNTY-OWNED LAND FOR A
COMMUNITY SERVICE BUILDING**

THIS LEASE AGREEMENT, made and entered into this _____ day of _____, _____, by and between the Starlite Community Services District, hereinafter referred to as "Lessee," and the County of Inyo, a political subdivision of the State of California, hereinafter referred to as "County," memorializes the agreement of the parties as follows:

WITNESSETH:

SECTION ONE. ADMINISTRATION.

This lease shall be administered on behalf of the County by the Director of the Public Works Department, and on behalf of Lessee by the President of the Starlite Community Services District.

SECTION TWO. LEASED PREMISES.

County hereby leases to Lessee certain real property, referred to herein as the "Leased Premises," located within the area commonly known as Starlite Estates, and more particularly described in and shown on Exhibit A hereto.

SECTION THREE. LEASE TERM.

The term of this Lease will be forty (40) years, beginning July 1, 2003 and terminating on June 30, 2043.

SECTION FOUR. HOLDING OVER.

If Lessee remains in possession of the Leased Premises with the consent of County, either expressed or implied, after the expiration of the Lease term, Lessee's tenancy shall be deemed to be a tenancy from month to month upon the same terms and conditions as are set forth in the Lease, provided that such tenancy shall be terminable and may be terminated upon at least thirty (30) days prior written notice of such termination served by either Lessee or County on the other party in the manner prescribed by law.

SECTION FIVE. RENT.

Via a 4/5ths vote of the Inyo County Board of Supervisors, the County granted this Lease to Lessee pursuant to Government Code Section 25365 and in that action determined that no rent shall be required of Lessee because Lessee is a public entity and will use the Leased Premises for a specific public purpose.

SECTION SIX. USE OF PREMISES.

The Leased Premises shall be used by Lessee only for the purpose of constructing thereon and subsequently using a community service building. Further, in the event Lessee becomes legally empowered and authorized to provide fire suppression services, Lessee may, in addition, subsequently use the building as a fire station. Lessee agrees to restrict its use to such purposes, and not to use or permit the use of the Premises for any other purpose without first obtaining the consent in writing of County. Lessee further understands that the unauthorized use of the Leased Premises for a purpose other than that described above constitutes a default hereunder, entitling the County to terminate the Lease in accordance with Section Thirty hereof.

SECTION SEVEN. DELIVERY OF POSSESSION.

Delivery of possession shall be deemed completed as of the date of execution of this instrument. Lessee represents and warrants that Lessee has examined the Leased Premises, including all buildings and improvements thereon and that as of the effective date of the lease, they are all in good order, repair, and in safe and clean condition.

SECTION EIGHT. QUIET POSSESSION.

The County covenants and agrees with Lessee that, as long as it uses the Leased Premises for the purposes described above, or gains permission from the County to use the Premises for a different use and this Lease is amended accordingly, and if it otherwise complies with all the terms and conditions of this Lease, Lessee may lawfully, peacefully, and quietly have, hold, use, occupy, and enjoy the Leased Premises and each part thereof during the term of this Lease without hindrance or interruption by County.

SECTION NINE. PARKING.

Lessee shall have reasonable non-exclusive use of any parking as may exist or be provided at the Lease Premises.

SECTION TEN. HOURS OF USE.

Lessee shall have access to the Leased Premises at any time on a twenty-four hour per day, seven-day per week basis.

SECTION ELEVEN. UTILITIES.

Lessee is and shall solely be responsible for procuring, and paying all costs, fees, and expenses associated with the provision of, all utilities, such as water, sewer, electricity, and telephone, as are necessary for the reasonable use and enjoyment of the Leased Premises by the Lessee for the purposes described above. The County has no obligation or responsibility to ensure that any utility is provided to the Leased Premises or to pay any cost, fee, or expense associated with the provision of any utility to/at the Leased Premises.

SECTION TWELVE. REPAIRS AND MAINTENANCE.

Lessee shall maintain the Leased Premises including any structures thereon that currently exist or are erected during the term of this Lease, and keep them in good repair at Lessee's own expense. When the County notifies Lessee that the Leased Premises or any building or structure thereon is in need of repair, Lessee shall make such repairs within thirty (30) days of receiving the notification. If the nature of the repairs are such that they must be performed immediately in order to provide for the immediate safety of the public, Lessee will perform such emergency repairs immediately. If Lessee is unable to perform such emergency repairs immediately, the County reserves the right to make such repairs itself, or hire a contractor to make such repairs, at Lessee's expense.

SECTION THIRTEEN. ENTRY FOR INSPECTION AND MAINTENANCE.

County reserves the right to enter the Leased Premises at reasonable times, upon twenty-four (24) hour prior notification to the Lessee, to inspect the Premises, to perform required maintenance and repair, or to make necessary additions or alterations to any part of the Premises. Lessee agrees to permit County to do so. County may, during such time as is reasonably necessary to make such alterations, additions, or repairs, erect scaffolding, fences, and similar structures, post relevant notices, and place movable equipment without incurring any liability to Lessee for disturbance of quiet enjoyment of the premises, or loss of occupation thereof.

SECTION FOURTEEN. ALTERATIONS AND IMPROVEMENTS.

Lessee shall make no alterations or improvements in or on the Leased Premises without the prior written consent of County. All alterations and improvements made by Lessee, other than removable personal property, shall remain on the Leased Premises and be deemed to be property of County upon the expiration or sooner termination of the Lease, unless otherwise agreed in writing by Lessee and County. Any damage occasioned by the installation or removal of Lessee's personal property shall be repaired by Lessee.

SECTION FIFTEEN. SIGNS.

Lessee may erect signs necessary to identify Lessee's occupancy and use of the Leased Premises during the term of this Lease. Lessee shall not place the proposed signs on the Leased Premises until County has reviewed and consented to the proposed design. County shall not unreasonably withhold said consent. Signs shall comply with Chapter 18.75 of the Inyo County Code, entitled "SIGNS," and shall be removed by Lessee at the termination or expiration of this Lease.

SECTION SIXTEEN. WASTE.

Lessee shall give prompt notice to County of any damages to the Leased Premises and shall not commit, or suffer to be committed, any waste or injury, or allow any public or private nuisance on the Leased Premises.

SECTION SEVENTEEN. FIRE INSURANCE.

At its sole expense Lessee shall procure and maintain fire and extended coverage insurance on all buildings or other structures present or erected on the Leased Premises. Such insurance coverage shall be in policy amounts of no less than the replacement cost of each building or structure and shall name the County of Inyo as an additional insured.

SECTION EIGHTEEN. DAMAGE OR DESTRUCTION.

In the event that the Leased Premises are totally or partially damaged by an event which is covered by the insurance policy described in Section Seventeen during the term of this Lease, other than through the fault or neglect of Lessee, repairs shall be made by Lessee at Lessee's sole expense, with all reasonable dispatch. In the event that damage by such event, other than through the fault or negligence of Lessee, amounts to substantial destruction of the Leased Premises which cannot be repaired in three (3) months, this Lease may be terminated by either party at its option by giving written notice of intention to the other party within thirty (30) days following said destruction. If the Leased Premises are damaged or destroyed through the sole fault or negligence of Lessee or its employees, agents, invitees, or sublessees, this Lease may not be terminated by Lessee, and it shall be the obligation of Lessee, at its sole expense, to reconstruct or repair said Leased Premises.

SECTION NINETEEN. INSURANCE.

a. General Liability.

Lessee shall procure and maintain in force throughout the duration of this Lease comprehensive liability and property damage insurance in accordance with the following terms and conditions:

- (1) The carrier must be acceptable to the County of Inyo and have a "Best's Policyholders Rating" of an "B" or "B+";
- (2) The policy must have minimum coverage levels of One Million dollars (\$1,000,000) per occurrence, combined single limit for bodily injury liability and property damage liability;

- (3) The policy must include premises liability, construction alterations, contractual liability, and products/completed operations coverage;
- (4) The policy shall contain a provision prohibiting the cancellation or modification of said policy except upon thirty (30) days prior written notice to the County; and
- (5) The County of Inyo be named as an additional insured, and a certificate of insurance shall be provided to County at least ten (10) days after the effective date of Lease.

b. Workers' Compensation.

Contractor shall procure and maintain in force throughout the duration of this Lease workers' compensation insurance coverage for all Lessee's employees who work on the Leased Premises. By executing and entering into this Lease, Lessee acknowledges its obligations and responsibilities to its employees under the California Labor Code and warrants that Lessee has complied, and will comply during the term of this Lease, with all provisions of the California Labor Code with regard to its employees. A certificate of insurance shall be provided to the County upon its request.

Lessee expressly waives its immunity for injuries to its employees and agrees that the obligation to indemnify, defend, and hold harmless provided for in this Lease extends to any claim brought by or on behalf of any employee of the Lessee. This waiver is mutually negotiated by the parties. This shall not apply to any damage resulting from the sole negligence of the County, its agents and employees. To the extent any of the damages referenced herein were caused by or resulted from the concurrent negligence of the County, its agents, or employees, the obligations provided herein to indemnify, defend, and hold harmless is valid and enforceable only to the extent of the negligence of the Lessee, its officers, agents, and employees.

SECTION TWENTY. HOLD HARMLESS.

Lessee shall defend, indemnify, and hold the County free and harmless from and for any and all costs, judgments, liabilities, damages, or expenses, including costs of suit and attorney's fees, arising out of or from any claimed injury or damage to persons or property sustained in, on, or about the Leased Premises, or arising out of Lessee's operation of the Leased Premises, or as a result of Lessee's acts or omissions or those of Lessee's agents, officers, or employees, in carrying out any activity upon the Premises, or arising out of any condition in, on, or above, the Leased Premises. Lessee specifically waives any and all claims against the County for damages or compensation claimed or sustained by reason of any defect, deficiency, or impairment of any water system, electrical supply system, or electrical apparatus or wiring services on Leased Premises.

SECTION TWENTY-ONE. COMPLIANCE WITH LAW.

Lessee shall, at its sole cost, comply with all requirements of all County, State and Federal ordinances, laws, rules, and regulations now in force, or which may hereafter be in force, pertaining to the use of Leased Premises, and shall faithfully observe and obey all County, State and Federal ordinances, laws, rules, and regulations now in force, or which hereafter may be in force. If Lessee's failure to obey and comply with any of these rules, laws, ordinances, or regulations results in any assessment of fines, penalties, or damages against the County, Lessee will pay such fines, penalties, or damages and any costs the County incurs in defending or adjudicating such violations.

SECTION TWENTY-TWO. TAXES, ASSESSMENTS, AND FEES.

In accordance with Revenue and Taxation Code section 107.6, Lessee is hereby advised that this lease may create a possessory interest subject to property taxation and that, if such an interest is created, Lessee is solely responsible for the payment of all property taxes levied on that interest. In addition, Lessee shall timely pay all taxes

and assessments of whatever character that may be levied or charged upon the leasehold estate in the Leased Premises, or upon Lessee's operations thereon. Lessee shall also pay all license or permit fees that may be necessary, or which may be required by law, for the conduct of its operations at the Leased Premises.

SECTION TWENTY-THREE. MODIFICATION/AMENDMENT.

Upon their agreement, the parties hereto may modify, change, or amend any provision of this Lease by executing a writing memorializing the modification, change, or amendment.

SECTION TWENTY-FOUR. TERMINATION.

Except as provided below, this Lease may be terminated by either party, without penalty, for any reason, at any time after execution of this Lease. Such termination shall be effective on the one hundred eightieth (180th) day after one party gives to the other written notice of termination. However, the giving of such notice shall not release either the County or the Lessee from full and faithful performance of all covenants of this Lease during the period between the giving of notice and the effective date of termination. Notwithstanding the forgoing, the County may terminate this Lease upon thirty (30) days' written notice to Lessee:

1. In the event Lessee ceases to use the Leased Premises for a community service building; or
2. In the event Lessee becomes legally empowered and authorized to provide fire suppression services and subsequently uses the Leased Premises or portion thereof for a fire station, and then ceases to use the Leased Premises for a community service building and/or fire station.

SECTION TWENTY-FIVE. RETURN OF PROPERTY AT TERMINATION.

Lessee will return the property in good condition upon termination or expiration of the Lease.

SECTION TWENTY-SIX. ASSIGNMENT AND SUBLEASE.

Lessee agrees not to assign this Lease or sublet the Leased Premises, or encumber its leasehold estate, or any interest therein, or permit the same to be occupied by another, either voluntarily or by operation of law, without first obtaining the written consent of County, which consent shall not be unreasonably withheld. Any such assignment or sublease shall not release Lessee from liability hereunder, and any assignee or sublessee shall expressly assume all Lessee's obligations hereunder including, without limit, the restriction that the Leased Premises may be used only for a fire station and community hall. It is also agreed that the giving of a written consent required herein on any one or more occasions shall not thereafter operate as a waiver of the requirement for written consent on any one or more subsequent occasions.

SECTION TWENTY-SEVEN. MECHANIC'S LIENS.

Lessee agrees to keep the Leased Premises free from all mechanic's liens or other liens of like nature arising because of work done or materials furnished upon the leased premises at the instance of, or on behalf of Lessee, provided however that Lessee can contest such lien provided it post an adequate bond therefore.

SECTION TWENTY-EIGHT. FORCE MAJEURE.

If either party hereto shall be delayed or prevented from their performance of any act required hereunder by acts of God, restrictive governmental laws or regulations, strikes, civil disorders, or other causes not involving the fault, and beyond the control, of the party obligated (financial inability excepted), performance of such act shall be waived for the period of the delay. However, nothing in this clause shall excuse the Lessee from the timely payment of any

utility, service, or other charge required to be paid by Lessee to a third party and related to Lessee's use of the Leased Premises.

SECTION TWENTY-NINE. WAIVER.

It is agreed that any waiver by County of any breach of any one or more of the covenants, conditions, or terms of this Lease shall not be construed to be a waiver of any subsequent breach of the same or different provision of the Lease; nor shall any failure on the part of the County to require exact, full, complete, and explicit compliance with any of the covenants or conditions of this Lease be construed as in any matter changing the terms hereof, nor shall the terms of this Lease be changed or altered in any way whatsoever other than by written amendment, signed by both parties.

SECTION THIRTY. DEFAULT.

In the event that Lessee or County shall default in any term or condition of this Lease, and shall fail to cure such default within thirty (30) days following service upon the defaulting party of a written notice of such default specifying the default or defaults complained of, or, if the default cannot reasonably be cured within thirty (30) days but the defaulting party fails to commence curing the default within thirty (30) days and thereafter to diligently and in good faith continue to cure the default, the complaining party may forthwith terminate this Lease by serving the defaulting party written notice of such termination.

SECTION THIRTY-ONE. INUREMENT.

This Lease shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, successors, and assigns.

SECTION THIRTY-TWO. ATTORNEY'S FEES AND COSTS.

In any legal proceeding initiated by a party to the Lease against the other party arising from or relating to the Lease or the use of the Leased Premises hereunder, the non-prevailing party shall pay all costs, including reasonable attorney's fees, incurred by the prevailing party in connection with the legal proceedings.

SECTION THIRTY-THREE. SEVERABILITY.

If any provision of this Lease or the application thereof to any person or circumstances shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such provisions to person or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each provision of this Lease shall be valid and be enforced to the fullest extent permitted by law.

SECTION THIRTY-FOUR. TIME IS OF ESSENCE.

Time is expressly declared to be of the essence in this Lease and in all of the covenants and conditions herein.

SECTION THIRTY-FIVE. ADDITIONAL TERMS AND CONDITIONS.

Additional terms and conditions of the Lease, if any, are set forth in the exhibits listed below, each of which is attached hereto and incorporated herein by this reference: [List exhibits such as Exhibit A, B, etc., or indicate "N/A" if inapplicable to Lease]

N / A

SECTION THIRTY-SIX. ENTIRE AGREEMENT.

The Lease contains the entire agreement between the parties hereto and supersedes all previous agreements between the parties with respect to the subject matter of the Lease.

SECTION THIRTY-SEVEN. CONSTRUCTION OF AGREEMENT.

Both County and Lessee have had the opportunity to and have participated in the drafting and final preparation of this Lease agreement. For that reason, the Lease itself, or any ambiguity contain therein, shall not be construed against either the County or Lessee as the drafter of this document.

SECTION THIRTY-EIGHT. NOTICE.

Any notice required by the Lease or applicable law to be given or served on Lessee or County may be given or served either by personal delivery to the lease administrators identified in Section One or by depositing the notice in the United States Mail, postage prepaid, to the address of each party as given below:

COUNTY

_____ Department
_____ Street
_____ City and State

LESSEE

STARLITE CSD Name
PO. Box 1434 Street
BISHOP, CA City and State

**LEASE BETWEEN THE COUNTY OF INYO AND THE
STARLITE COMMUNITY SERVICES DISTRICT FOR THE USE OF COUNTY-OWNED LAND FOR A
COMMUNITY SERVICE BUILDING**

**Term of Lease:
July 1, 2003 through June 30, 2043**

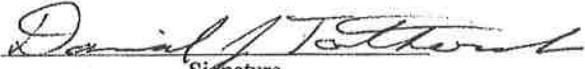
IN WITNESS THEREOF, the parties hereto have set their hands and seals this _____ day of _____, 20____.

LESSOR

LESSEE

County of Inyo

By _____

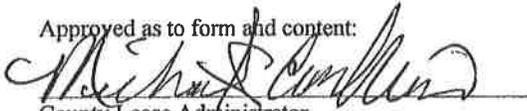

Signature

DANIEL J. TOTHERON
Type or Print Name

Date: _____

Date: Nov. 6, 2003

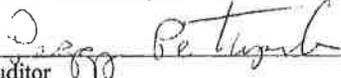
Approved as to form and content:


County Lease Administrator

Approved as to form and legality:

County Counsel

Approved as to accounting form and content:


County Auditor

Approved as to insurance and risk management:

County Risk Manager

iC:\Leases\DistrictLeases\StarliteCommunityServicesDistrict.doc

**LEGAL DESCRIPTION OF PROPOSED
LEASE OF A PORTION OF THE STARLITE
ESTATES PARK SITE**

That portion of Section 23, Township 7 South, Range 31 East, M.D.M., in the County of Inyo, State of California, shown as "SUBJECT PARCEL" on the attached "STARLITE PARK BISHOP, CA" map and more particularly described as follows:

The southerly 120.00 feet of that certain parcel of land granted to the County of Inyo per the deed recorded April 13, 1975, in Book 212, Pages 224 and 225, of Official Records in the office of the County Recorder of said county, being further described as follows:

COMMENCING at the southwest corner of Starlite Estates Tract No. 3, as shown on the map thereof recorded in Book 2, Page 100 of Subdivision Maps in the office of said County Recorder;

THENCE along the westerly prolongation of the south line of Starlite Drive as shown on said map, South 89°08'09" West, 483.00 feet to the northwest corner of said land deeded to Inyo County;

THENCE along the west line of said land deeded to Inyo County, South 0°51'51" East, 160.00 feet to the TRUE POINT OF BEGINNING of the herein described subject parcel;

THENCE continuing along said west line, South 0°51'51" East, 120.00 feet to the southwest corner of said land deeded to Inyo County;

THENCE along the south line thereof, North 89°08'09" East, 224.00 feet the southeast corner thereof;

THENCE along the east line of said land deeded to Inyo County, North 0°51'51" West, 120.00 feet;

THENCE leaving said east line, South 89°08'09" West, 224.00 feet to the TRUE POINT OF BEGINNING.

Contains 26,880 square feet, more or less.



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

- Consent Departmental Correspondence Action Public Hearing
 Schedule time for Closed Session Informational

For Clerk's Use
Only:

AGENDA NUMBER

25

FROM: Public Works Department and County Counsel

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Approval of A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO ORDERING THE AGREEMENTS BETWEEN THE CITY OF LOS ANGELES AND THE COUNTY OF INYO TRANSFERRING OWNERSHIP OF THE TOWN WATER SYSTEMS BE RECORDED (Resolution) by correcting the February 17th, 2004 Board Order *nunc pro tunc* to authorize the filing of the Transfer Agreements for the Town Water Systems and to take steps incident thereto.

DEPARTMENTAL RECOMMENDATIONS: Request your Board approve the attached Resolution (a) correcting the February 17th, 2004 Board Order *nunc pro tunc* by adding at subparagraph B) the direction and authority to record the the Town Water System Transfer Agreements (Agreements) with the Inyo County Clerk Recorder; (b) Directing the Deputy Clerk of the Board to review and on finding the signature of Rene Mendez to be true, acknowledge the signature on each Agreement which attestation shall be treated as timely consistent with the *nunc pro tunc* correction; (c) Authorizing that all paperwork and acts needed to record the Transfer Agreements shall be completed and may be signed by the County Administrator or designee to the extent further signatures are needed; and (d) Authorizing the Chair to sign the Resolution.

SUMMARY DISCUSSION: There were many steps that needed to be completed after the February 17, 2004 Board Order was signed before the Agreements could be filed. In fact the Agreements were not actually signed until January 24, 2005 by LADWP pursuant to City of Los Angeles Ordinance 176352 and January 25, 2005 by the County of Inyo pursuant to the February 17, 2004 Board Order. The February 17, 2004 Board Order did not specifically provide for recording the Agreements with the Recorder. The attached Resolution corrects the February 17, 2004 Board Order *nunc pro tunc*, "now as then" and enables the steps incidental to recording, as well as the act of recording, to occur.

ALTERNATIVES: The Board could choose not to approve the Resolutions, which is not recommended since recording is expected by the terms of the Agreements.

OTHER AGENCY INVOLVEMENT:
County Counsel created the Resolution

FINANCING:

None

APPROVALS

COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by County Counsel prior to submission to the board clerk.)	Approved: <u>Margaret Kemp-Williams</u>	Date: <u>11/12/15</u>
AUDITOR/CONTROLLER	ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the auditor/controller prior to submission to the board clerk.)	Approved: _____	Date: _____
PERSONNEL DIRECTOR	PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)	Approved: _____	Date: _____

DEPARTMENT HEAD SIGNATURE:
(Not to be signed until all approvals are received) Clint Quilty By [Signature] Date: 11-12-15

RESOLUTION No. 2015 _____

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO ORDERING THE AGREEMENTS BETWEEN THE CITY OF LOS ANGELES AND THE COUNTY OF INYO TRANSFERRING OWNERSHIP OF THE TOWN WATER SYSTEMS BE RECORDED

WHEREAS the Stipulation and Order of Judgment (Court Order) arising out of the case entitled *City of Los Angeles; Department of Water and power of the City of Los Angeles v. Board of Supervisors of the County of Inyo, et.al.*, Inyo County Superior Court Case Number 12908 required the City of Los Angeles to transfer ownership of the water systems in the Towns of Lone Pine, Independence and Laws (water systems) then owned by the City of Los Angeles and controlled/managed by the Los Angeles Department of Water and Power (LADWP) for the sum of one dollar (\$1.00) each; and

WHEREAS the Inyo County Board of Supervisors (Board) by Board Order approved the Transfer Agreements effectuating the transfer of ownership of the water systems to Inyo County from LADWP on behalf of the City of Los Angeles per the Court Order on February 17, 2004; and

WHEREAS the Board Order authorized the filing of a Notice of Exemption with the Inyo County Clerk Recorder's Office (Recorder), but did not specifically authorize nor direct the filing of the Agreements with the Recorder following signatures being obtained, which is a mistake; and

WHEREAS the Inyo County Board February 17, 2004 Board Order authorized Rene Mendez to sign the Transfer Agreements for the County; and

WHEREAS by Ordinance Number 176352 the City of Los Angeles on December 15, 2004, memorialized its approval of and transfer of the ownership of the water systems "with sufficient water or water rights to supply the service areas of those communities;" and

WHEREAS the Transfer Agreements for the water systems could not be recorded until the legislative process was completed by the City of Los Angeles as reflected in Ordinance Number 176352; and

WHEREAS the Transfer Agreements have not been recorded and it is in the public interest for them to be recorded in that such recording serves as constructive notice of the transfers and is expected by the terms of the Transfer Agreements which are authorized by Ordinance 176352; and

WHEREAS Ordinance 176352 authorized the Transfer Agreements to be signed as approved by the Board of Water and Power Commissioners (Water Commission); and

WHEREAS the Water Commission approved Resolution 005 089 authorizing Ronald F. Deaton, General Manager, to sign the Agreements transferring ownership of the water systems, which he did January 24, 2005, as authorized by ordinance; and

WHEREAS Rene L. Mendez, Inyo County Administrator, signed the Agreements for Inyo County on January 25, 2005; and

WHEREAS the Inyo County Deputy Clerk of the Board has personal knowledge as to the signature of Rene Mendez and can so attest; and

WHEREAS the Inyo County Deputy Clerk of the Board is empowered by statute to certify the Agreements for filing.

NOW THEREFORE, THE INYO COUNTY BOARD OF SUPERVISORS ORDERS:

1. The February 17, 2004 Board Order is corrected this date *nunc pro tunc* by adding at subparagraph B) the direction and authority to record the Agreements with the Inyo County Clerk Recorder; and
2. The Deputy Clerk of the Board is directed to review and if she finds the signature of Rene Mendez true, acknowledge the signature on each Agreement; such attestation is an incident of the filing/recording requirements and integral to the right to record the Agreements and shall therefore be treated as occurring as a direct result of correcting the original February 17, 2004 Board Order *nunc pro tunc* and treated as timely with that Order, although attested to at a later date; and
3. All paperwork and acts needed to record the Transfer Agreements shall be completed and may be signed by the County Administrator or designee to the extent further signatures are needed.

PASSED AND ADOPTED on this 17th day of November 2015 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Chairperson of the
Board of Supervisors of Inyo County,
State of California

ATTEST: Kevin Carunchio, Clerk of the Board

By _____
Patricia Gunsolley
Assistant Clerk of the Board



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only:
AGENDA NUMBER

26

- Consent Departmental Correspondence Action Public Hearing
 Scheduled Time for Closed Session Informational

FROM: Planning Department – Yucca Mountain Repository Assessment Office

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Draft Supplement to the U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada

DEPARTMENTAL RECOMMENDATION: Review the Draft Supplement to the U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada; review draft correspondence in regards thereto, and; authorize the Chair to sign.

SUMMARY DISCUSSION: The County has been participating in licensing activities being conducted by Nuclear Regulatory Commission (NRC) concerning the proposed Repository for High Level Nuclear Waste at Yucca Mountain for many years. In 2008, the NRC issued and Adoption Determination Report (ADR) which concluded that the Department of Energy's (DOE) final Environmental Impact Statement (EIS) which addresses the impact of the proposed Repository did not adequately address all the potential impacts on groundwater or from surface discharges of groundwater – in part due to the County's concerns – and required the DOE to prepare a Supplemental EIS (SEIS) analyzing groundwater impacts. In accordance with applicable law, DOE elected to not prepare the required SEIS, but instead, requested the NRC to prepare it and submitted an Analysis of Postclosure Groundwater Impacts report in July 2009 to the NRC. In October 2014, DOE issued an updated Analysis of Postclosure Groundwater Impacts report, which provided technical updates to the 2009 report and information necessary to allow for NRC to prepare the required SEIS.

The NRC released the draft SEIS for public comment in August of this year (see Exhibit 2 for the federal register notice).¹ The SEIS supplements DOE's 2002 Final EIS for the Repository and the subsequent 2008 Final SEIS, as required by the NRC's 2008 ADR. The SEIS describes the affected environment and assesses potential impacts with respect to contaminant releases that could be transported through the volcanic-alluvial aquifer in Fortymile Wash and the Amargosa Desert, and to the Furnace Creek/Middle Basin area of Death Valley, over a one-million-year period on the aquifer, soils, ecology, and public health, as well as the potential for disproportionate impacts on minority or low-income populations and cumulative effects. The draft SEIS finds that all of the potential direct, indirect, and cumulative impacts would be small.

County staff and its consultants have reviewed the SEIS and have prepared draft correspondence for the Board's consideration (refer to Exhibit 1) urging the NRC consider recent groundwater investigations and trends, and requesting monitoring to determine whether contaminants from the Repository have entered the groundwater system, and potentially mitigation should such contamination be detected. The correspondence also raises environmental justice, socioeconomic, and cumulative impact issues. County staff, Supervisors Kingsley and Tothoroh, and its consultants have participated in public meetings being held by the NRC regarding the SEIS; public comment from those meetings has been incorporated into the draft correspondence as appropriate. Comments were due by October 20, but the due date was extended to November 20, partly due to the County's request.

¹ Refer to <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2184/#pub-info> to review the SEIS.

ALTERNATIVES: The Board could direct modification to the correspondence or not submit correspondence; the latter option is not recommended due to the potential impacts to the County.

OTHER AGENCY INVOLVEMENT: NRC, DOE, State of California, State of Nevada, other Affected Units of Local Government, and other interested parties

FINANCING: Resources for this work are budgeted within Yucca Mountain Oversight Budget #620605 through fund balance.

<u>APPROVALS</u>	
COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS <i>(Must be reviewed and approved by county counsel prior to submission to the board clerk.)</i> Approved: _____ Date _____
AUDITOR/CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS <i>(Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.)</i> Approved: _____ Date _____
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS <i>(Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)</i> Approved: _____ Date _____

DEPARTMENT HEAD SIGNATURE:  Date: 11/12/15
(Not to be signed until all approvals are received)

Exhibits

- 1. Draft Correspondence
- 2. Federal Register Notice

November 17, 2015

Cindy Bladey
Office of Administration
Mail Stop: OWFN-12-H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain

Docket ID NRC-2015-0051

Ms. Bladey:

On behalf of the Inyo County Board of Supervisors, I thank you for the opportunity to comment on the Supplement to the U.S. Department of Energy's (DOE) Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain (SEIS). As an Affected Unit of Local Government, only a few miles down watershed from the proposed Yucca Mountain repository, the long-term health, safety and welfare of Inyo County residents is our highest concern, particularly in relation to potential contamination of ground water resources as a result of the proposed repository. We thank the Nuclear Regulatory Commission (NRC) for addressing the County's concerns regarding the Draft SEIS and the County's concerns regarding potential groundwater contamination from the proposed Repository.

NRC's National Environmental Protection Act (NEPA) regulations (10 CFR § 51.109(c)(2)) provide that it will not be practicable to adopt any EIS prepared by DOE for a geologic repository if there is "significant and substantial new information or new considerations [that would] render such environmental impact statement inadequate." As identified in these comments, such new information exists and should be analyzed in the SEIS. In addition, we believe that the final SEIS should address mitigation, remediation and groundwater monitoring to ensure that any contaminants from the repository that enter the groundwater system are detected and that the impacts, should such contamination be detected, are mitigated.

The Adoption Determination Report prepared by the NRC for the DOE's Environmental Impact Statements for the Proposed Geologic Repository at Yucca Mountain (EIS) noted that the previous EISs did not provide a complete and adequate discussion of the impacts on soils and surface materials from a potential future discharge of contaminated groundwater, and specifically noted the following items should be addressed:

- NRC Item #1 - "A description of the locations of potential natural discharge of contaminated groundwater for present and expected future wetter periods;
- NRC Item #2 - A description of the physical processes at the surface discharge locations that can affect accumulation, concentration, and potential remobilization of groundwater-borne contaminants; and,
- NRC Item #3 - Estimates of the amount of contaminants that could be deposited at or near the surface. This involves estimates of the amount of groundwater involved in discharge or near-surface evaporation, the amounts of radiological and non-radiological contaminants in that water, contaminant concentrations in the resulting deposits, and potential environmental impacts (e.g. effects on biota)."

Additionally, Inyo County raised the following concerns with regard to the previous EISs:

- Inyo Item #1 - The full extent of the lower carbonate aquifer, particularly those parts that could become contaminated and how water can leave the flow system should be described;
- Inyo Item #2 - The potential for a decrease or elimination of the upward vertical gradient beneath Yucca Mountain due to proposed future up-gradient groundwater pumping and export by the Southern Nevada Water Authority;
- Inyo Item #3 - Impacts to Endangered Species that are dependent on the springs in the region; and,
- Inyo Item #4 - Cleanup and remediation measures should be described.

Inyo County has reviewed the SEIS in collaboration with two hydrogeologist consultants, Hydrodynamics and Andy Zdon and Associates, Inc, both of whom have extensive expertise in the proposed Yucca Mountain Nuclear Repository environmental analysis completed to date, with particular emphasis on the Death Valley Regional Flow System Numerical Model (DVRFM) used to inform the EIS and SEIS. Attached hereto are the independent analyses of the SEIS prepared by each of the aforementioned consultants.

Hydrodynamics' general opinion is that both DOE and NRC have done a credible job of extending the analysis to the accessible environment as Hydrodynamics suggested in comments on the original environmental documents (see attached Memorandum). Their analysis incorporated Hydrodynamics published reports providing the results of the Lower Carbonate Aquifer (LCA) and Death Valley hydraulic studies submitted in prior comments. Hydrodynamics notes that the DOE and NRC analyses did not indicate additional problems that would make the repository more hazardous. The following key points can be made from Hydrodynamics' review.

- **Point 1:** DOE/NRC analysis suggested that pumping at Amargosa Farms would capture all of the potential contamination. When pumping was included, no contaminants made it to Death Valley. Continued pumping into the future is a reasonable assumption.
- **Point 2:** DOE/NRC analysis indicate that the upward hydraulic head gradient between the LCA and the overlying Tertiary aquifer is a barrier to radionuclide transport both in the area of the repository and in the Amargosa Farms area. Should pumping stop at the Amargosa Farms or the upward gradient be degraded and contaminants migrate to the Carbonate aquifer, radionuclide transport through the LCA into the Death Valley Furnace Creek springs will be relatively fast. The upward head gradient must be preserved into the future to protect the human and natural resources of Inyo County.
- **Point 3:** Hydrodynamics' estimate of discharge in the Furnace Creek area and the DOE's estimates do not match. However, DOE's evapotranspiration (ET) values used in the DVRFM were significantly larger than Hydrodynamics' values, and represent a worst case scenario for radionuclide transport.
- **Point 4:** DOE/NRC particle tracking and radionuclide dose models for the Death Valley Furnace Creek and lower section of Amargosa Valley areas are SMALL, and are well within EPA health standards.
- **Point 5:** DOE's FEIS does not provide a viable mitigation plan as required by the NEPA permitting process. A mitigation plan is completely absent from the NRC 2015 Supplement to DOE's EIS in a Draft Report for Comment.

Since 2010, Inyo County has worked in collaboration with the U.S. Bureau of Land Management, U.S. Geological Survey (USGS), Nye County, and other interested parties to conduct detailed and ongoing analysis of the DVRFM used to inform the EIS and SEIS. The results of these studies document substantive changes to the conceptual model presented in previous Yucca Mountain analyses by the U.S. Department of Energy and NRC. This important new work has not been considered and incorporated into the analysis presented in the SEIS. The new field work and analysis by the USGS and consultants in the Inyo County portion of the Amargosa Basin (Shoshone-Tecopa area specifically) affects the conceptual model for the Amargosa Desert – Ash Meadows area. The post-2010 field work and studies are discussed at length in the attached Andy Zdon and Associates study.

The SEIS states on page 2-6 that “[S]ome small portion of the groundwater flow from beneath Yucca Mountain may enter the Southern Death Valley Subregion to the south and east.” The attached Andy Zdon and Associates report finds that by failing to consider existing conditions and post-2010 field work and analysis, the SEIS underestimates flow from the Amargosa Desert and Ash Meadows through the Amargosa River and the aquifer into Inyo County (particularly the Shoshone area). In addition, the report shows that the conceptual model as presented in the SEIS appears to have substantial uncertainties and inconsistencies. Further, the report finds that due to the absence of consideration of new data and analysis concerning the conceptual model of the Amargosa River basin that has been conducted since 2010, the SEIS is non-responsive to NRC items #1, 2, 3 and 4. Moreover, the SEIS is also non-responsive to Inyo County’s concerns concerning the previous EISs that are identified above because of the lack of consideration of new data and analyses pertinent to the SEIS.

The Andy Zdon and Associates study also identifies deficiencies in the SEIS resulting from: (1) the DVRFM’s failure to address potential changes associated with seismic activity in the region over the one-million year planning horizon; (2) potential changes in groundwater should water rights in the Amargosa Farms area be fully exercised or if the region’s solar energy production potential is realized; (3) lack of analysis of increased groundwater pumping up gradient from Yucca Mountain that may result from groundwater pumping and water export proposed by the Southern Nevada Water Authority (SNWA) pursuant to applications to pump groundwater that were filed with the Nevada State Engineer in 1989; (4) a lack of analysis of potential impacts of the repository on endangered and threatened species, such as the Amargosa Vole, Least Bell’s Vireo; and, (5) the continued absence of a remediation plan or analysis of potential environmental impacts should remediation be implemented. Items 1 through 3 are reasonable foreseeable events, which should be considered in the analysis according to NEPA and discussion of items 4 and 5 is also required by the Act.

With regard to the proposed groundwater pumping by SNWA, such pumping is reasonably foreseeable and should be analyzed in the SEIS to describe the impacts of such regional groundwater pumping on the hydrology under and in the vicinity of the proposed repository. It is clear that SNWA’s groundwater pumping is reasonably foreseeable. The Final SEIS on page 8-46 (§8.4.2), incorporates Chapter 5 of the Rail Alignment EIS. On page 5-37 (§5.2.2.6), the Rail Alignment EIS describes potential groundwater development projects—including a massive groundwater extraction and importation project by the SWNA that is located over and within the regional carbonate aquifer. The Rail Alignment EIS states that “...cumulative water use for the projects described above could total more than 430 million cubic meters (350,000 acre-feet) per year.” Some of this groundwater may be withdrawn from the LCA or from areas recharging the LCA.

Moreover, with regard to the SWNA project, the SEIS does not mention a ruling of the Nevada State Engineer (Ruling 5465, January 4, 2005) (<http://water.nv.gov/scans/rulings/5465r.pdf>), which has already granted the SNWA the right to pump 8,905 acre-feet of groundwater from the Tikapoo and Three Lakes

Valley hydrographic basins as part of its regional groundwater importation project. Significantly, in Ruling 5465, the State Engineer found that groundwater in Tikapoo and Three Lakes Valleys eventually discharges through the LCA at Ash Meadows and Death Valley. Despite the scope of the SNWA project, the only assessment of impacts of the proposed project assumes that such pumping will only be 10,600 acre-ft/yr as opposed to the 350,000 acre-ft/yr described in the Rail Alignment EIS (See SEIS, p. 2-18.)

In the vicinity of Yucca Mountain, there is an upward hydraulic gradient between the LCA and the overlying volcanic aquifers. The upward gradient is important to the performance of the repository because it restricts groundwater flow and radionuclide transport pathways to overlying volcanic and alluvial aquifers and it prevents radionuclides from entering the LCA. The SEIS should analyze the potential groundwater pumping under the SNWA project to determine whether such pumping would affect the upward hydraulic gradient beneath Yucca Mountain. As identified in the attached Andy Zdon and Associates Study (page 3-18 – 3-19), a new numerical model of the regional aquifer system released by the USGS in 2014 can be used to assist in the required analysis.

Not only does SNWA's project have the potential to affect the vital upward hydraulic gradient, but a continuation of existing groundwater pumping over the long-term could affect the gradient. The SEIS modeled the effects of maintaining 2003 pumping rates for 500 years and concluded that such pumping would not affect the hydraulic gradient (SEIS, p. 2-28 to 2-29). In contrast, in a report done as part of the County of Inyo's assessment of the repository, Bredehoeft, J. and M. King., 2010, "Potential Contaminant Transport in the Regional Carbonate Aquifer Beneath Yucca Mountain, Nevada, USA." *Hydrogeology Journal*. Vol. 18, Issue 3. pp. 775–789, the authors found that when the Death Valley regional groundwater flow system hydrogeologic framework model (the DVRFM) developed by the U.S. Geological Survey was run for 1000 years at 1995 groundwater pumping levels, the model predicted drawdown of 10 meters in the lower carbonate aquifer in the vicinity of Yucca Mountain and more than 70 meters of additional drawdown in the Amargosa Valley in the next several hundred years. Given the importance of the upward hydraulic gradient, the SEIS should assess the potential impacts on the gradient of maintaining existing groundwater pumping over the long-term.

The DVRFM was used by DOE in the development of the site-scale hydrogeologic framework model (HFM2006), which in turn was used to develop the model used to simulate groundwater flow directions and flow rates of water from beneath the repository to the southern end of the controlled area boundary. The DOE's site scale model takes boundary conditions from the DVRFM. The DVRFM was calibrated to water levels observed in the mid-1990s. The model is capable of generating steady-state water levels that do not include the impacts of pumping on water levels. DOE used the steady-state water levels (that essentially excluded the impacts of a continuation of existing pumping) as the boundary condition for its hydrogeologic Site Model. Consequently, neither the predicted drawdown in the Amargosa Valley, nor the drawdown in the lower carbonate aquifer in the vicinity of Yucca Mountain that will result from a continuation of groundwater pumping at current levels in the vicinity of the repository, was considered in the SEIS's analyses of the potential impacts to upward gradient in the lower carbonate aquifer.

As noted NRC's Adoption Determination Report (Section 3.2.1.4.2), an incomplete and inadequate characterization of a potential impact constitutes a significant new consideration that renders the SEIS inadequate—irrespective of the magnitude of potential impacts.

Although the SEIS provides a discussion of potential cumulative impacts (SEIS Section 4.5.2), Inyo County believes that the SEIS fails to provide a sufficient analysis of cumulative impacts associated with the movement of contaminants through groundwater into the Amargosa desert and then into Inyo County from the proposed repository in combination with contaminants from Nevada National Security Site and/or the Beatty Low-Level Waste and Hazardous Waste Disposal Facilities (where a recent explosion caused a fire that may have released nuclear material into the atmosphere and the groundwater table). As

defined in 40 CFR 1508.7, cumulative effects are those impacts that result from incremental impacts of a proposed action when added to other past, present and reasonably foreseeable future actions, regardless of whether a federal or nonfederal agency or person undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions that can take place over time. Actions causing cumulatively significant impacts should be examined in an EIS (40 CFR 1508.125(a)(2)). The federal courts have required that an agency take a “hard look” at the cumulative effects of a project, *Oregon Natural Resources Council v. Marsh*, 52 F. 3d 1485 (9th Cir. 1995).

The SEIS and DOE’s previous EISs do not adequately address groundwater monitoring and mitigations for potential groundwater contamination affecting Inyo County communities, including Tecopa, Shoshone, and Furnace Creek. The SEIS and the previous environmental documents admit that there will be leakage of contaminants from the proposed repository. However, the SEIS and the previous EISs do not analyze mitigation and remediation measures that are necessary to protect the public health and safety and other environmental impacts from radionuclides and other contaminants leaving the repository site due to flooding or traveling through the saturated zone and surfacing within or outside of Inyo County. Rather, DOE defers mitigation and remediation planning to such time that “detection of any unusual conditions in groundwater.” In addition, none of the environmental documents describe a monitoring plan that would be capable of detecting “unusual conditions in groundwater.” The only commitment to monitoring is DOE statement that it will conduct monitoring activities, including monitoring groundwater quality, but no details are provided. (Final EIS, Chapter 9, p. 9-8 and 9-9.)

Procedures for monitoring existing baseline conditions and potential contamination escaping from the repository and groundwater quality through the Amargosa Basin need to be identified and analyzed in the SEIS. Monitoring procedures should also include protocols for informing affected residents of possible groundwater concerns should any contamination be detected. The SEIS should identify mitigations to prevent or minimize impacts to the health, safety and welfare of Inyo County residents, particularly to disadvantaged and Tribal communities.

The County also believes that the SEIS should provide a more robust analysis of environmental justice concerns and mitigations associated with the likelihood of disproportionate impacts to low-income communities and Native American tribes resulting from locating the repository in an area of predominantly disadvantaged communities than is provided in Section 3.4 of the SEIS. As described in the attached hydrogeological models, contaminants from the repository may impact groundwater in the communities of Furnace Creek, Shoshone and Tecopa. Groundwater contamination in and around Furnace Creek will directly impact the water in the historic home of the Timbisha-Shoshone Native American Tribe who continue to live in Death Valley. The community of Tecopa is a disadvantaged community with a 27% poverty rate. The SEIS should address environmental justice impacts for these communities which are most vulnerable to potential contamination and should address monitoring to ensure that these communities are protected.

In addition to health and safety concerns regarding potential impacts from the Yucca Mountain Repository, Inyo County is also concerned that potential groundwater contamination may also have widespread socioeconomic impacts affecting nearby residents, and Inyo County generally. Inyo County’s base economic industries are agriculture and tourism, which largely supported by visitors to Death Valley National Park. As described in previously submitted comments, groundwater contamination from Yucca Mountain would irrecoverably devastate these industries and, if only a small amount of contaminates should escape from the repository, the resulting publicity would severely adversely affect tourism in Eastern Inyo County. Therefore, the SEIS inadequately analyzes socioeconomic impacts to Inyo County that would result from potential groundwater contamination.

In 2008, Inyo County contracted with economic consultants to determine the potential impacts of the Yucca Mountain Repository on the Inyo County economy¹. Their research indicated that above and beyond the financial impacts the County would realize from actual contamination, the mere existence of the Repository could stigmatize nearby areas. The impacts of this stigmatization were then modeled, and their analysis indicated that upon announcement of the Repository's operation, visitation to Death Valley National Park and vicinity will drop between 17.3 and 26.3 percent. If the Repository operates for ten years with no incident, it is estimated that the drop in visitation will be between five and 14.7 percent. If there is a transportation incident, it is estimated that visitation will drop between 29 and 57 percent. The resulting total annual losses resulting from loss of visitation to Death Valley are predicted to range from about \$32,000,000 to \$184,000,000. Predicted revenue decreases to the County range between about \$350,000 and \$4,000,000. Additional losses could occur from the diseconomies of scale and investment disincentives. As noted above, potential groundwater contamination raises similar concerns about socioeconomic effects.

Thank you again for the opportunity to comment on the DOE's SEIS for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain. If you have any questions, please contact the County's Administrative Officer, Kevin Carunchio, at (760) 878-0292 or kcarunchio@inyocounty.us.

Sincerely,

Matt Kingsley, Chairperson
Inyo County Board of Supervisors

Attachments:

- 1) Bredehoeft, John, NAE , and King, Michael, R.G., C.E.G., C.HG, Memorandum Research Program for Evaluation of Yucca Mountain Nuclear Waste Repository Site, October 10th, 2015
- 2) Andy Zdon and Associates, LLC, Technical Review Summary of the Draft Supplement To U.S. Department Of Energy's Environmental Impact Statement For The Proposed Nuclear Fuel And High-Level Radioactive Waste Repository At Yucca Mountain, Nevada, October 23, 2015

¹ Gruen Gruen + Associates, *A County at Risk: The Socio-economic Impacts of the Proposed Yucca Mountain High-level Nuclear Waste Repository*, 2008.



INYO COUNTY YUCCA MOUNTAIN REPOSITORY ASSESSMENT OFFICE

MEMORANDUM RESEARCH PROGRAM FOR EVALUATION OF YUCCA MOUNTAIN NUCLEAR WASTE REPOSITORY SITE U.S. Nuclear Regulatory Commission (NRC) 2015 Supplement to the U.S. Department of Energy (DOE) Environmental Impact Statement (EIS) Draft Report for Comment Review

October 10, 2015

**Michael King, R.G., C.E.G., C.HG, and Dr. John Bredehoeft, NAE:
The *Hydrodynamics* Group, LLC**

The *Hydrodynamics* Group, LLC reviewed NRC's 2015 Supplement to DOE's EIS in a Draft Report for Comment for the Yucca Mountain Nuclear Repository site. DOE's Final Environmental Impact Statement (FEIS) and subsequent SEIS are part of the required National Environmental Protection Act (NEPA) project permitting process. The format and issues to be address in both the FEIS and SEIS are mandated by statute.

Background

Hydrodynamics reviewed the DOE's October Draft 2007 SEIS in December of 2007. It was our general conclusions that the DOE 2007 Draft SEIS:

1. Did not fully reference or utilize DOE sponsored Inyo County hydrogeology research on the Lower Carbonate Aquifer (LCA).
2. Did not fully or accurately characterize the LCA.
3. Did not adequately discuss the upward gradient in the LCA as a barrier to radionuclide transport or possible impacts on repository performance with a possible loss in the upward gradient due to regional groundwater usage.
4. Did not model radionuclide transport out to the point of the accessible environment in the biosphere.

DOE in writing its original EIS referred its safety analysis to a point of compliance that is 18 km to the south of the proposed repository. Their argument was that the point of compliance is the point of maximum contamination from the repository; if the repository proved to be safe at this point, it would be safe at points further downstream. We argued that the DOE analysis of safety should be carried to the point where contaminants were brought to the accessible environment. The NRC accepted this argument and in response

DOE's 2008 analysis extended contaminant transport from the point of compliance to the surface environment.

In the 2008 DOE analyses, two critical issues were identified: 1) groundwater pumping at Amargosa Farms, and 2) discharge from the springs at Furnace Creek. Two climate scenarios were considered: 1) present day, and 2) a wetter and cooler climate.

The NRC published their 2015 Supplement to DOE's EIS Draft Report for Comment. As stated by the NRC, the scope of the Draft Report for Comment was:

This supplement describes the affected environment and assesses the potential environmental impacts with respect to potential contaminant releases from the repository that could be transported through the volcanic-alluvial aquifer in Fortymile Wash and the Amargosa Desert, and to the Furnace Creek/Middle Basin area of Death Valley. This supplement evaluates the potential radiological and nonradiological impacts—over a one million year period—on the aquifer environment, soils, ecology, and public health, as well as the potential for disproportionate impacts on minority or low-income populations. In addition, this supplement assesses the potential for cumulative impacts associated with other past, present, or reasonably foreseeable future actions. The NRC staff finds that all of the potential direct, indirect, and cumulative impacts on the resources evaluated in this supplement would be SMALL.

Statement of the Problem

Inyo County concerns and issues are to ensure that repository siting and subsequent repository activities do not adversely impact the public health, safety, or welfare of County residents, including those in Death Valley National Park. Therefore, our review of the FEIS and SEIS is specific to the geology and hydrogeology related sections:

1. Affected Environment
2. Environmental Impacts of Postclosure Repository Performance
3. Cumulative Impacts

Key questions in determining the acceptance of DOE's FEIS and SEIS, and NRC's supplement to DOE's EIS are 1) does the document utilize the latest data and analysis to accurately characterize the current environment at the Yucca Mountain repository site; and 2) does it document the potential impacts of the repository on the environment, and/or the environment on the performance of the repository?

NRC Draft Report Review

Hydrodynamics reviewed the 2015 NRC Draft Comment on DOE's Supplement to its EIS relative to 1) review comments on DOE's 2008 FEIS, and 2) the current NRC updated analysis of DOE's 2008 FEIS. The results of NRC's FEIS supplemental report are discussed for specific issues concerning impacts in Inyo County.

DOE/NRC's approach to evaluating potential impacts of Yucca Mountain stored nuclear waste materials on the down-gradient hydrologic environmental is based on the results of the numerical and analytical models of:

1. Yucca Mountain Numerical Site Model
2. DOE's Death Valley Regional Numerical Model
3. DOE's Nuclear Particle Tracking Analysis
4. Analytical Model that extend the dose calculations to the Amargosa Desert and to Death Valley.

Yucca Mountain Numerical Site Model: This model evaluated radionuclide/groundwater migration from the repository through the unsaturated zone to the water table, and then down-gradient from the site. The Yucca Mountain site consists of an upper unsaturated zone, a saturated Tertiary Aquifer, and an underlying Lower Carbonate Aquifer (LCA). A key assumption in this model is that the upward hydraulic head gradient between the LCA and the overlying Tertiary aquifer is an adequate barrier to downward radionuclide transport. Contaminant transport was therefore confined to the upper Tertiary Aquifer. The reported pathway for groundwater movement from below the repository was down Forty-Mile Wash into the Amargosa Valley to the major groundwater pumping at Amargosa Farms. The model was specific to the 18 kilometer point of compliance. The DOE Death Valley Regional Model (DVRM) was utilized to evaluate groundwater movement beyond the point of compliance. The DVRM was developed by the U.S. Geological Survey (USGS).

Hydrodynamics' modeling of the Death Valley groundwater system showed that the LCA was the key to radionuclide transport into the Death Valley National Park Furnace Creek spring system. This analysis showed that if radionuclides enter into the LCA groundwater system, transport to the Furnace Creek springs could be as short as 500 years. The NRC referenced *Hydrodynamics'* report, but stated that the upward head gradient between the LCA and the Tertiary aquifer prevents transport through the LCA, and the fast track scenario from happening.

DOEs Death Valley Regional Model (DVRM): DOE divided the discharge area of the Death Valley Regional flow System into: Central Death Valley sub-region, and the Southern Death Valley sub-region. *Hydrodynamics* focused its analysis on the major springs that discharge into the Furnace Creek area in the Central Death Valley sub-region. The DVRM originally modeled steady-state groundwater flow conditions. Transient groundwater flow was modeled to a limited extent. The model was also used to evaluate both current climate and potential wet conditions in the future.

Point 1

Hydrodynamics used a model based upon data that describes the LCA taken from the DVRM to simulate groundwater flow through the LCA from Yucca Mountain to the Furnace Creek major springs in Death Valley National Park. This work suggested that the Furnace Creek springs were points of discharge from the regional flow system. Chris Fredrick's (USGS geologist) geologic mapping supported this analysis. Dr. Fredrick's

geological maps of the Southern Funeral Mountain Range were published by the USGS. *Hydrodynamics*' calculated an estimate of the current discharge of the springs in the attached Report.

DOE took a different approach in their DVRM analysis than *Hydrodynamics*. They established estimates of the evapotranspiration (ET) for the playa areas of the Central sub-region. These two approaches yield differing values for the Central sub-region discharge that are summarized in the following table:

	Hydrodynamics	DOE	DOE
	discharge	discharge	ET
	ac-ft/yr	ac-ft/yr	ac-ft/yr
FC Springs	3600	2300	
Cottonwood Basin			3030
FC Ranch			3410
Middle Basin			1960
Badwatter Basin			5950
West side vegetation			5390
Mormon Point			3950
TOTAL ET			23690

Hydrodynamics estimated discharge from the Furnace Creek springs to be 3,600 ac-ft/yr compared to 2,300 ac-ft/yr calculated by DOE. DOE's value is approximately 38% lower than the *Hydrodynamics* discharge value. However, DOE used the total ET, 23,000 ac-ft/yr, to make its analysis of contaminant transport. Implicit in the DOE ET estimate is that water transpired is discharge from the Middle Death Valley Regional Flow sub-region. The value used in the final DVRM was 3,410 ac-ft/yr for the Furnace Creek Ranch area. This value is much closer to the *Hydrodynamics*' estimate of discharge in the Furnace Creek Ranch area. The DOE reported ET of 23,700 ac-ft/yr is a relative large value in comparison to *Hydrodynamics*' calculated value. By using a larger value, DOE's DVRM represents a more conservative estimate of contaminant transport to the Death Valley National Park area. DOE shows that even using their higher ET values (shown in the table above) the repository meets the NRC safety test.

Point 2

The DVRM particle tracking analysis showed that radionuclides do not reach the LCA providing current pumping rates at the Amargosa Farm are maintained into the future. This pumping preserves the upward head gradient between the LCA and the Tertiary aquifer that, in theory, prevents radionuclides from migrating into the LCA. There is agreement that some level of pumping in at the Amargosa Farms will continue into the future. A significant reduction of pumping at the Amargosa Farms into the future could be problematic in terms of mixing LCA fluids with potential radionuclides in the shallower aquifer system. However, we have no evidence future pumping will be greatly reduced.

Point 3

Spring deposits in the lower section of Amargosa Valley would be an area of discharge in a cooler, wetter climate. The DVRM accounted for this condition. DOE limited its detailed analysis of the lower section of the Amargosa Valley in the Franklyn Lake Playa region because it is the farthest down-gradient region in the DVRM with limited potential impacts on our understanding of groundwater flow from the repository. The current understanding of the of the Franklyn Lake Playa area from the DVRM particle tracking analysis showed only 2 out of 8,000 particles reach the Franklyn Lake Playa area.

Andy Zdon & Associates, Inc. completed a detailed hydrogeology analysis of the lower section of Amargosa Valley in the last year. This analysis indicates that the primary source of groundwater discharge to this region is through the Ash Meadows spring area. This conclusion is consistent with DOE’s analysis that shows limited impact on the lower section of Amargosa Valley from potential radionuclide discharge from the Yucca Mountain Repository. The results of the Andy Zdon & Associates analysis are now published.

DOE’s Nuclear Particle Tracking Analysis & Dose Calculations: DOE conducted a radionuclide particle tracking analysis to determine the trajectory of contamination. DOE then used an analytical model to estimate radioactive doses at specific locations throughout the Death Valley region. The NRC reported the dose values for both the Death Valley area and the Furnace Creek area in the following tables:

Table 3-8. Amount of Radiological and Nonradiological Material (From the Repository) in the Aquifer Environment Between the Regulatory Compliance Location and Death Valley

	Present-Day Climate		Cooler/Wetter Climate	
	10,000 years	1 million years	10,000 years	1 million years
U isotopes (Ci)	1.5	1,320	1.5	1,320
Th isotopes (Ci)	0.18	791	0.18	791
Np-237 (Ci)	1.4	581	1.4	581
I-129 (Ci)	2.5	65	2.2	15
Tc-99 (Ci)	1,260	1,520	1,160	435
Se-79 (Ci)	5.8	204	5.8	204
Mo (kg)	1.4×10^6	4.6×10^5	1.4×10^6	3.0×10^5
V (kg)	2.2×10^3	4.2×10^5	2.2×10^3	4.2×10^5
Ni (kg)	1.7×10^7	1.3×10^8	1.7×10^7	1.3×10^8

U = uranium, Th = thorium, Np = neptunium, I = iodine, Tc = technetium, Se = selenium, Mo = molybdenum, Ni = nickel,

Table 3-9. Average Concentrations of Radiological and Nonradiological Material From the Repository Discharging in Groundwater at Furnace Creek, Death Valley

	Present-Day Climate		Cooler/Wetter Climate	
	10,000 years	1 million years	10,000 years	1 million years
U isotopes (pCi/L)	0	0	0	0
Th isotopes (pCi/L)	0	0	0	0
Np-237 (pCi/L)	0	0	0	0
I-129 (pCi/L)	0	0.65	0.02	0.17
Tc-99 (pCi/L)	0	13.5	9.3	3.8
Se-79 (pCi/L)	0	0	0	0
Mo (mg/L)*	0	0.001	0	3.7×10^{-4}
V (mg/L)	0	0	0	0
Ni (mg/L)	0	0	0	0

*calculated peak concentration of 0.04 mg/L for Mo occurs at 58,000 years after repository closure
 U = uranium, Th = thorium, Np = neptunium, I = iodine, Tc = technetium, Se = selenium, Mo = molybdenum,
 V = vanadium, Ni = nickel

*(Taken from NRC's 2015 Supplement to DOE's EIS in a Draft Report for Comment
 Pages No. 3-22 and 3-23)*

NCR found that impacts on the aquifer environment at Furnace Creek and Middle Basin to be SMALL. The *Hydrodynamics Group* agrees with this conclusion.

Compliance with NEPA Requirements

As stated earlier, DOE's FEIS and subsequent SEIS are part the required National Environmental Protection Act (NEPA) project permitting process. The format and issues to be address in both the FEIS and SEIS are mandated by statute. *Hydrodynamics'* review of NRC's 2015 Supplement to DOE's EIS in a Draft Report for Comment reveals that the document does not provide a mitigation plan for radionuclide releases from the Yucca Mountain Repository. The mitigation plan in the DOE FEIS was limited to a brief discussion on cooperation with multiple public and government agencies to develop an actual mitigation plan.

DOE and the NRC conclude in the FEIS and SEIS reports that radionuclides will be released from the Yucca Mountain repository. Although DOE concluded that doses of radionuclides at the accessible environmental are SMALL, this does not alleviate the requirement to provide a mitigation plan. This deficiency must be corrected for acceptance of the NRC 2015 Supplement to DOE's SEIS in their Draft Report for Comment.

SUMMARY OF REVIEW COMMENTS

It is *Hydrodynamics'* general opinion that both DOE and NRC have done a credible job of extending the analysis to the accessible environment as we suggested. Their analysis incorporated *Hydrodynamics'* published reports providing the results of LCA and Death Valley hydraulic studies submitted in prior comments. DOE and NRC analysis did not indicate additional problems that would make the repository more hazardous. The following key points can be made from this review.

Point 1: DOE/NRC analysis suggested that pumping at Amargosa Farms would capture all of the potential contamination. When pumping was included, no contaminants made it to Death Valley. Continued pumping into the future is a reasonable assumption.

Point 2: DOE/NRC analysis indicate that the upward hydraulic head gradient between the LCA and the overlying Tertiary aquifer is a barrier to radionuclide transport both in the area of the repository and in the Amargosa Farms area. Should pumping stop at the Amargosa Farms or the upward gradient be degraded and contaminants migrate to the Carbonate aquifer, radionuclide transport through the LCA into the Death Valley Furnace Creek springs will be relatively fast. The upward head gradient must be preserved into the future to protect the human and natural resources of Inyo County.

Point 3: *Hydrodynamics*' estimate of discharge in the Furnace Creek area and the DOE's estimates do not match. However, DOE's ET values used in the DVRM were significantly larger than *Hydrodynamics*' values, and represent a worst case scenario for radionuclide transport.

Point 4: DOE/NRC particle tracking and radionuclide dose models for the Death Valley Furnace Creek and lower section of Amargosa Valley areas are SMALL, and are well within EPA health standards.

Point 5: DOE's FEIS does not provide a viable mitigation plan as required by the NEPA permitting process. A mitigation plan is completely absent from the NRC 2015 Supplement to DOE's EIS in a Draft Report for Comment.

PROPOSED ACTION TO CORRECT DIFFERENCES IN THE NRC 2015 SUPPLEMENTAL EIS DOCUMENT

The NRC 2015 Supplement to DOE's SEIS should be corrected to include 1) a plan to monitor the potential release of radionuclides at the source in the Yucca Mountain Repository, and 2) incorporating mitigation plans to capture the radioactive materials before entering the unsaturated and saturate groundwater flow system. It is our opinion that it may be prohibitive to effectively prevent radionuclides from reaching the assessable environment, such as the Amargosa Farms area, once they move into the saturated zone aquifer system beneath the Yucca Mountain Repository.

It is important that DOE and the NRC address groundwater use conditions that may reduce the upward gradient in the LCA. Specifically, groundwater use permits have been approved and pending for pumping of large quantities of groundwater from the LCA on the northern and eastern boundaries of the DVRM boundaries. The potential for impact of increased Carbonate pumping on the upward head gradient between the LCA and the Tertiary aquifer at both the repository site and in the Amargosa valley area has not been analyzed. As part of the NEPA permitting process, potential impacts that could result from pumping under these permits should be determined.

ATTACHMENT
***Hydrodynamics'* Water Use in the Furnace Creek Ranch Area**
of
Death Valley Report

WATER USE IN THE FURNACE CREEK AREA OF DEATH VALLEY

Marvin Jensen, Consultant, Fort Collins, CO
John Bredehoeft, The Hydrodynamics Group, Sausalito, CA
Terry Fiske, U.S. National Park Service, Death Valley, CA

INTRODUCTION

As a part of an ongoing effort by Inyo County, California to investigate the potential ramifications of a nuclear repository at Yucca Mountain the Hydrodynamics Group is investigating the Paleozoic Carbonate Aquifer. This aquifer is known to underlie the repository site. The ultimate discharge from the aquifer is thought to be in the springs on the southwest flank of the Funeral Mountains in the Furnace Creek area of Death Valley. This discharge of groundwater in the Death Valley springs is one of the potential pathways by which radionuclides from the repository might migrate back to the biosphere.

It is of particular interest to estimate the discharge from the springs. This provides a quantitative estimate of the flow through the aquifer, which in turn allows us to estimate quantitatively the hydraulic properties of the Carbonate Aquifer.

The springs support local vegetation in the alluvial fan area of the Furnace Creek and particularly the Furnace Creek Ranch. The Ranch includes a golf course, motel facilities, and a small Indian village. Another facility, Furnace Creek Inn, is located near the mouth of the fan. It was our intent to estimate the water use from the vegetated area of the Inn and the Ranch. Our original thought was that the irrigated vegetation and the human consumption used most of the water from Travertine and Texas springs. As we will see below, the irrigation demand during the summer months is approximately equal to the discharge of the two springs.

SPRING DISCHARGE

The discharge of the springs is not as readily measured as one might imagine. The water from Texas and Travertine springs are collected in tunnels, sumps, and buried tiles in the alluvium of Furnace Creek Wash below the springs. It is difficult to separate the Texas and Travertine spring flows in the collection system. Measuring the springs is also complicated by the fact that there are often several orifices.

The U.S. Geological Survey (USGS) investigated the spring flow in the 1960s (Pistrang and Kunkel, 1964). There are more recent measurements by the National Park Service (NPS), data taken in 2001 and 2003. With the help of Chris Fredrick of the USGS, we

tried to reconcile the earlier measurements. Table 1 is a summary of the spring data that includes our best estimate of the current spring discharge:

Table 1. Summary of Furnace Creek spring discharge—flow in cfs.

Spring	Pistrang & Kunkel	NPS 2001/2003	This report
Texas	0.50	0.45	1.0
Travertine	3.90	3.39	3.2
Navel			0.1
Nevaras	0.60	0.32	0.5
Cow Creek	0.10	0.10	0.1
Salt Creek			0.1
Total (flow in cfs)			5.0

WATER USE

Our combined estimate for Texas and Travertine springs is 4.2 cfs. Much of this flow goes to support the facilities in the oasis at Furnace Creek wash. As suggested above, these facilities include Furnace Creek Inn and Furnace Creek Ranch. Both have extensive grounds that are irrigated, including a golf course and date plum grove at the ranch. Both have lodging, restaurants, and bars; they both have large swimming pools.

It was our initial estimate that most of the water from Travertine Spring in particular is consumed by the facilities, including the irrigation in the Furnace Creek area. With that thought in mind, we set out to estimate the water consumption in the area. Figure 1 is a commercial satellite image of the Furnace creek area of Death Valley.

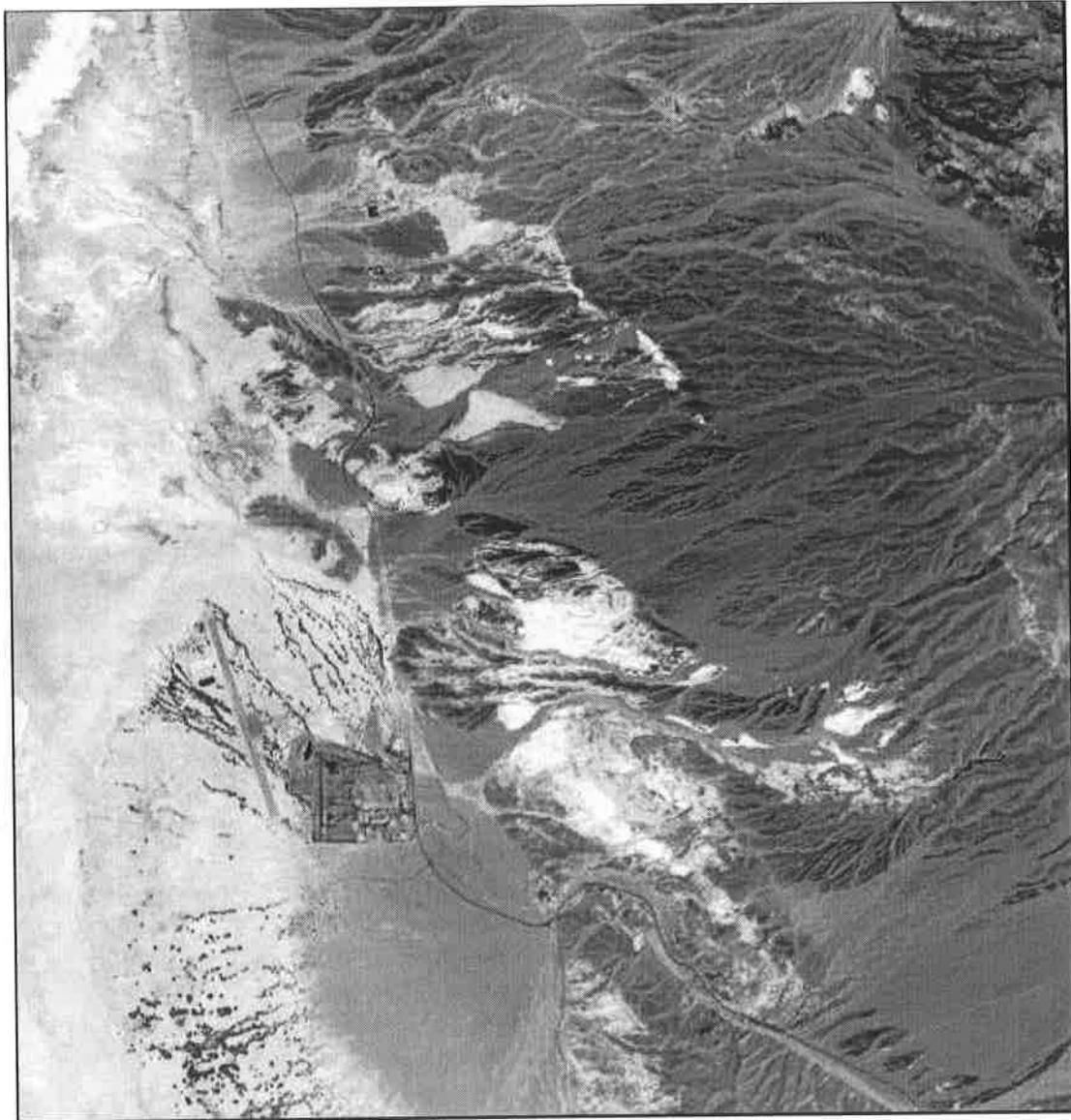


Figure 1. IKONOS satellite image of the Furnace Creek area of Death Valley.

On Figure 1, the image the Furnace Creek Ranch stands out, along with the airstrip. Figure 2 is a blow-up of the ranch area.

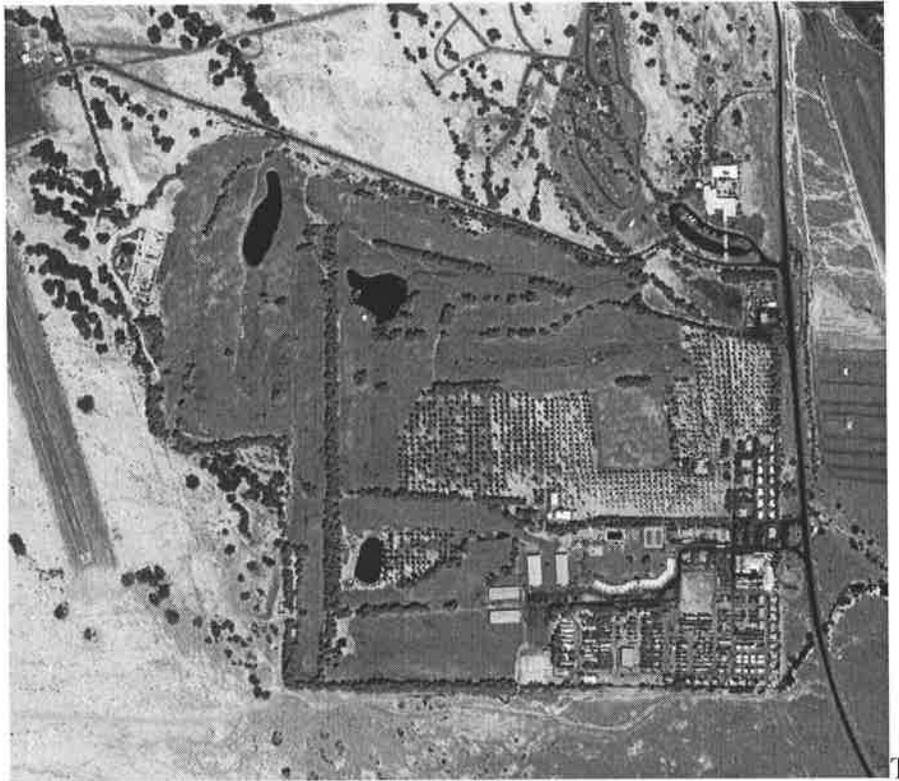


Figure 2. IKONOS false-color infrared image of the Furnace Creek Ranch area.

These IKONAS images have a 1-meter resolution. They can be viewed as TIFF files in Photoshop where they can be blown up to show individual automobiles in the parking lots. The golf course, the date grove, the various buildings, and even the swimming pool show up on Figure 2. The vegetation is easily mapped on this image. By looking closely one can see shadows cast by the palm trees. Figure 3 is a blow up of the Furnace Creek Inn and its surroundings.



Figure 3. IKONOS false color infrared image of the Furnace Creek Inn and its surroundings.

One can see in the Furnace Creek Inn image individual cars in the parking lot even on this picture. Things are much sharper working with the original satellite image. The image can be loaded and manipulated in Photoshop; this makes the interpretation possible on one's PC.

EVAPOTRANSPIRATION ESTIMATES FOR VEGETATED AREAS¹

Our purpose was to estimate the annual net evapotranspiration (ET) from vegetated areas of Furnace Creek Ranch and Furnace Creek Inn. A preliminary estimate was made of net ET by salt cedar growing along dry creek beds, or drains, below Furnace Creek Ranch.

Climate

Calculated reference ET is the most commonly used index of evaporative climate evaporative demand. It is based mainly on net radiation, but also includes the effects of humidity and wind speed as measured over well-watered vegetation such as clipped grass or alfalfa. The first step in estimating ET from the vegetated areas of Furnace Creek Ranch and Furnace Creek Inn was to estimate reference ET for the area. A large part of the Furnace Creek Ranch is in grass because of the golf course, but there also is a large area of date palms. The color infrared satellite photographs indicate that some of the areas of date palm appear to have vegetative ground cover, and other areas appear to be essentially bare soil between date palms.

Because of the large area of short grass, grass reference ET similar to that used by the California Irrigation Management System (CIMIS) was used to characterize average evaporative demand. Daily reference ET was calculated for a three-year period (1999-2001) using daily CIMIS data primarily from Ripley, California. Although Ripley (Lat. 33.53 °N, Long. 116.63 °W, Elev. 251 ft.) is further south than the study area (Lat. 36.47 °N, Long. 116.87 °W, Elev. -194 ft.), its elevation is closer to that of the study area than other CIMIS stations at higher latitudes such as Barstow, CA (Lat. 34.88 °N, Elev. 2,040 ft), and Owens Lake, CA (Lat. 36.48 °N, Elev. 3,684 ft). CIMIS Blythe, CA (Lat. 33.56 °N, Elev. 275 ft.) is located near Ripley and has similar climate to that of Ripley. Imperial Valley is also below sea level, but is located further south at about 32.8 to 33.1 °N latitude. Long-term average, or normal temperature data from the National Weather Service Death Valley Station No. 2319 (NCDC, 1992) were also used with the Hargreaves equation (Hargreaves and Samani, 1985; Hargreaves et al., 1985) for grass reference ET because it requires only mean air temperature and extraterrestrial solar radiation.

Climate Variables and Calculations

Three years of daily climate data from the station at Ripley, CA were downloaded from CIMIS. CIMIS stations generally are located over irrigated grass or irrigated alfalfa so that air temperatures are modulated by ET from the underlying surface. The long-term or normal air temperature reported for Death Valley appears to be from the airport which

would not be modulated by ET from the irrigated area. Therefore, the average air temperatures at Death Valley are generally several degrees C higher than that at Ripley (Figure 4). However, air temperature is not the major variable controlling reference ET. All calculations were done using SI metric units and summary values were converted to English units of feet and acre-feet (ac-ft).

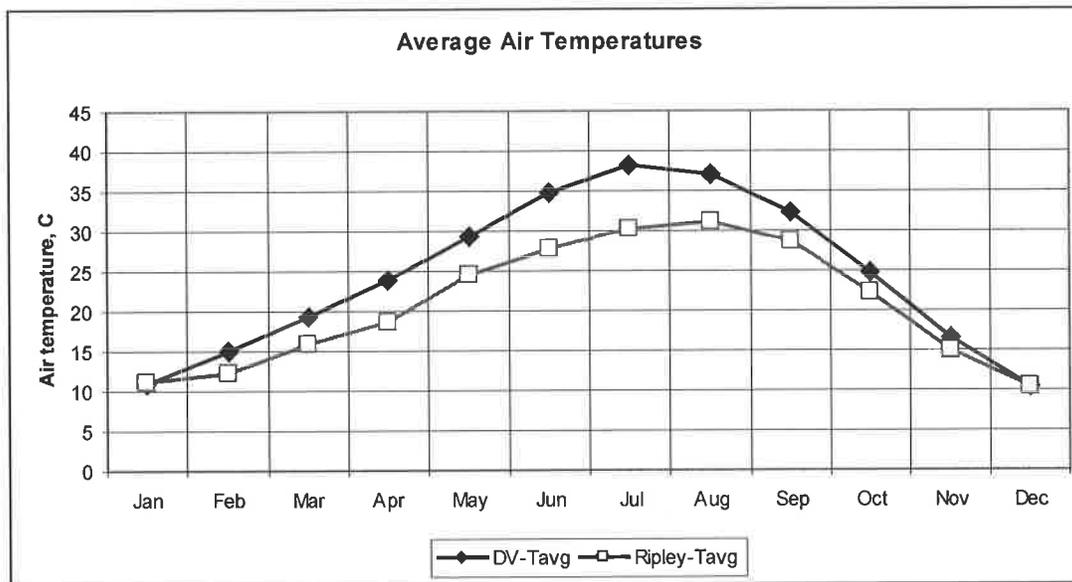


Figure 4. Average monthly air temperatures at Death Valley and Ripley, California.

Evaporative demand, or reference ET, is controlled mainly by solar radiation. The estimated clear-day solar radiation at Death Valley compared to that at Ripley is shown in Figure 5. During the summer months, there is very little difference in estimated clear-day solar radiation at Death Valley compared with Ripley, California. Because solar radiation is the primary variable, the estimated ASCE grass reference ET for Ripley was very similar to that based on the Hargreaves equation at Death Valley as shown in Figure 6. Also shown in Figure 6 for comparative purposes is the average 99-01 CIMIS ET_0 for Ripley and the weighted average ASCE ET_0 for 89-02 Imperial irrigation District (IID). The results indicate that the mid-summer average ASCE ET_0 for Ripley is a bit lower than the average ASCE ET_0 for the IID, but higher than the 99-01 average CIMIS ET_0 for Ripley. ASCE ET_0 values typically are slightly higher than CIMIS ET_0 calculated from hourly data. The average ASCE ET_0 values for Ripley were considered to be a reasonable and conservative estimate for the area.

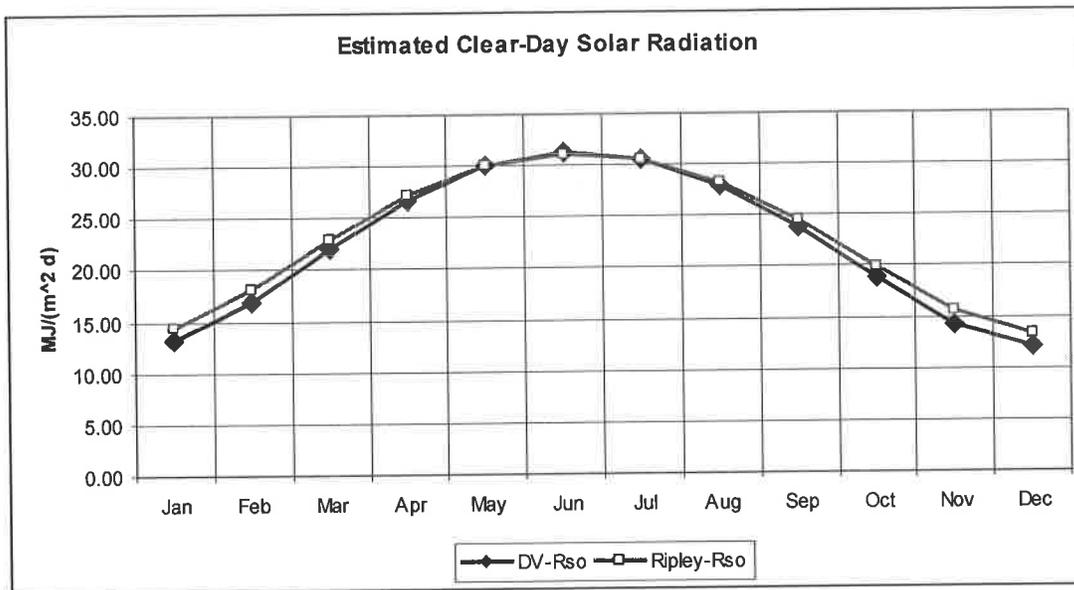


Figure 5. Estimated solar radiation on cloudless days at Death Valley and at Ripley, California.

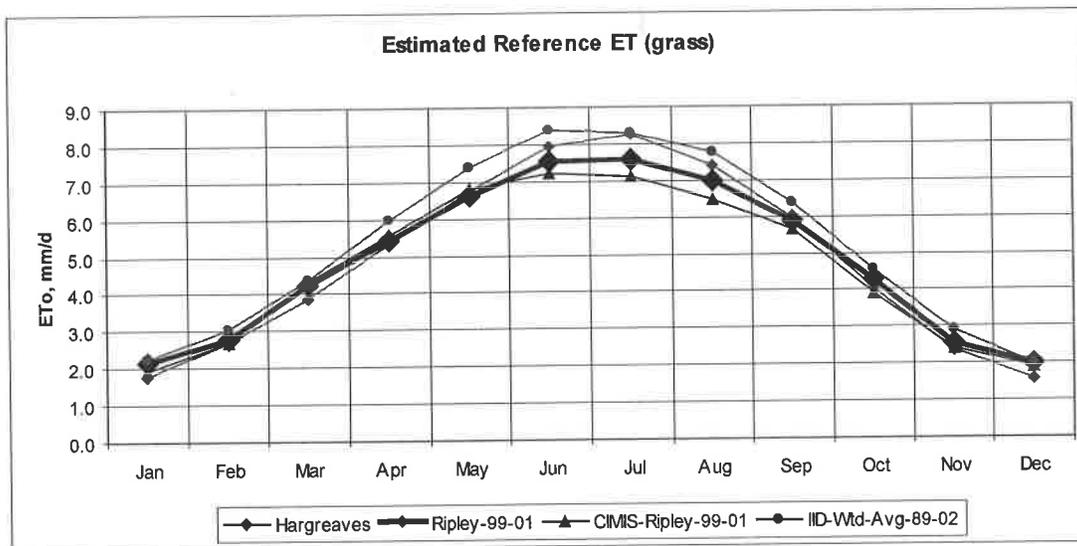


Figure 6. Estimated grass reference ET (ET₀) at Death Valley using Hargreaves ET₀ equation, ASCE ET₀ and CIMIS ET₀ for 99-01 Ripley, California, and weighted average ASCE ET₀ for 1989-2002 Imperial Irrigation District.

ASCE Standardized Reference ET Equation

The daily ASCE reference crop ET was estimated using Equation 1.

$$ET_{os} = \frac{0.408\Delta(R_n - G) + \gamma \frac{900}{T + 273} u_2 (e_s - e_a)}{\Delta + \gamma(1 + 0.34u_2)} \quad (1)$$

where ET_{os} = the standardized reference crop ET for a short vegetated surface under reference ET conditions in mm/d, R_n = net radiation at the reference surface in MJ/(m² d), G = soil heat flux density at the soil surface in MJ/(m² d), T = mean daily air temperature at 2-m height in °C, u_2 = mean daily wind speed at 2-m height, e_s = saturation water vapor pressure at the 2-m height calculated as the average vapor pressure at maximum and minimum air temperature in kPa, e_a = actual vapor pressure at the 2-m height in kPa, Δ = the slope of the vapor pressure-temperature curve in kPa/°C, and γ = the psychrometric constant in kPa/°C.

Crop (Vegetation) Coefficients

Today, the most common method used to estimate ET for crops and other vegetation is to first calculate reference ET and then apply a coefficient that varies with growth stage or time of year. Estimated ET is, therefore, the product of the coefficient (K_c) and reference ET.

$$ET = K_c ET_o \quad (2)$$

Table 2. Coefficients for various vegetative groups and associated acreage.

Area	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Golf course ^a	0.85	0.85	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.85	0.85
Ponds	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Date palms, with ground cover ^b	1.01	1.04	1.09	1.14	1.19	1.21	1.21	1.21	1.21	1.21	1.10	1.00
Date palms, clean cultivated ^c	0.81	0.84	0.89	0.94	0.99	1.01	1.01	1.01	1.01	1.01	0.90	0.80
Date palms, bare ground ^d	0.71	0.74	0.79	0.84	0.89	0.91	0.91	0.91	0.91	0.91	0.80	0.70
Grass, poor growth	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Vegetation by housing areas ^e	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Salt cedar (deciduous) by drains ^f	0.23	0.23	0.45	0.79	1.11	1.18	1.18	1.15	0.90	0.61	0.32	0.22

^a Assumed to be fairway quality Bermuda grass in summer and overseeded with intermediate ryegrass in the winter (Brown et al., 2003) and adequately watered year round.

^b For this area, 0.2 added to cleaned cultivated monthly date palm K_c .

^c Coefficients for clean cultivated date palms based on early studies using soil sampling measurements reported by Jensen and Haise (1963) and adapted to grass reference ET for use along the Colorado River.

^d For this area, 0.1 was subtracted from clean cultivated monthly date palm K_c because of essentially no vegetation between date palms.

^e Vegetation by buildings assumed to be grass, shrubs and trees. The area of buildings, parking and roads was reduced by a factor of 0.3.

^f Developed for use with grass reference ET and verified with measurements made in lysimeters in Arizona by van Hylckama (1974).

Coefficients typically are derived for use with either a grass reference ET (ET_o) or an alfalfa reference ET (ET_r). For this study, a grass reference ET was calculated and coefficients developed for the various groups of vegetation and associated acreage are summarized in Table 2.

Areas of Vegetation

Areas of different vegetation were outlined on a scanned copy of one of the satellite color photographs and the areas were then calculated using a CAD program. The scaling factor for the main vegetated area was based on the length of the airport runway. The scaling factor for the Furnace Creek Inn was based on an assumed length of the swimming pool of 80 ft. Alternatively, the tennis courts could have been used. A summary of the areas of various types of vegetation is presented in Table 2.

Average Annual Flow Rate

Average annual flow rate needed to sustain estimated net ET was calculated as the total annual ET in ac-ft divided by the area involved as summarized in Table 2. Net ET was calculated as estimated ET minus normal precipitation. Annual normal precipitation for Death Valley is only 2.28 inches.

Table 3. Areas of various vegetation types used in estimating average monthly and total annual ET depth and volume.

Vegetated area	Area, Acres	Estimated Net ET, ft	Estimated Net ET, ac-ft
Golf course	102.7	4.6	472
Ponds	3.1	5.6	18
Date palms w ground cover	7.7	6.6	51
Date palms, clean cultivated	3.5	5.4	19
Date palms, bare ground	13.4	4.9	65
Grass, poor growth	4.1	4.5	18
Vegetation, bldgs, parking, etc.	33.6	6.2	63 ^a
Furnace Creek Inn vegetation	10.4	6.2	65
Vegetation by NE buildings	1.3	6.2	8
Resort subtotal	180	4.3	779
Salt cedar by drains	140	4.8	672

^a The area was reduced by a factor of 0.3 to account for buildings, parking lots and roadways.

RESULTS

The estimated average monthly and annual rate of flow from Furnace Creek springs needed to sustain the estimated rate of net ET on the vegetated areas is summarized in Figure 7. The average annual flow rate for both resort and salt cedar vegetation is about 2.0 cfs. The average annual flow rate for resort vegetation is 1.1 cfs and for salt cedar

areas it is 0.9 cfs for a total of 2.0 cfs. However, the irrigation demand ranges from a low value of 0.50 cfs in the winter to a high of 3.75 cfs in the summer.

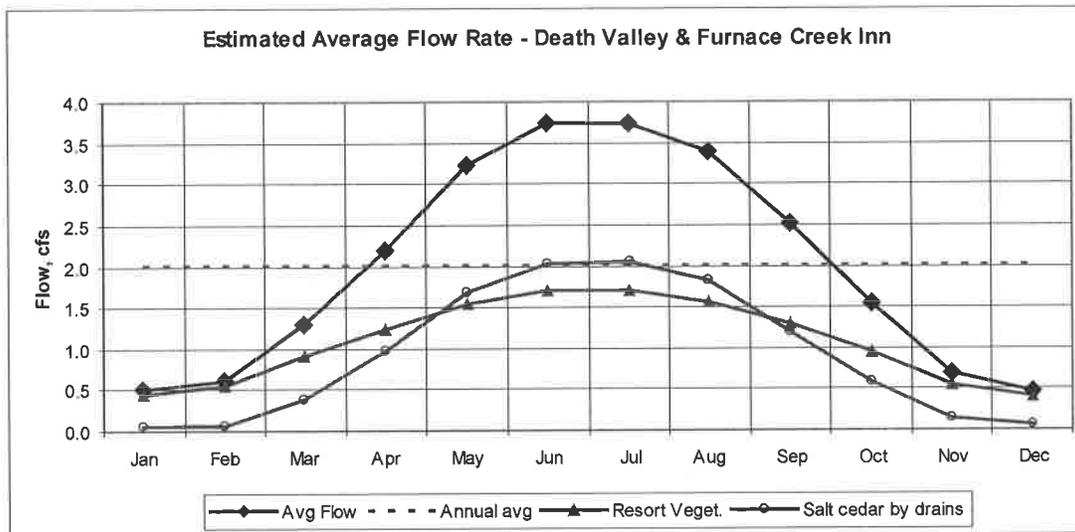


Figure 7. Estimated average flow rate needed to sustain net evapotranspiration of resort vegetation and salt cedar by drains.

DISSUSSION & CONCLUSIONS

The evapotranspiration by the various crops is high. It ranges a low of 4.4 ft/yr for grass to a high of 6.6 ft/yr for date palms with a grass undercover. The irrigated area is not large; the total is reduced for the buildings and paved area by 30%. The total annual consumptive use by the irrigation and the salt cedar is only 2.0 cfs. However, the demand is high in the summer months—3.75 cfs. The peak demand in the summer approaches the total low of both Texas and Travertine springs—our estimate 4.2 cfs. Given the uncertainty in the discharge of the springs, and perhaps some seasonal variation in flow, the irrigation demand is 90% of the combined discharge of the two springs—this is close to the estimated total flow of the two springs.

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BRIEF RESUMES OF THE AUTHORS

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Marvin E. Jensen retired from the Agricultural Research Service, USDA, in 1987, and from Colorado State University in 1993. Since 1993, he has been consulting on water consumption issues. He has 25 years of experience in measuring evapotranspiration in field experiments and over 40 years experience in estimating evapotranspiration. Jensen was the editor of the 1974 ASCE Report Consumptive Use of Water and Irrigation Water Requirements, and the senior editor of the 1990 ASCE Manuals and Reports on Engineering Practices No. 70 entitled Consumptive Use and Irrigation water Requirements.

As a specialist in irrigation water management and crop water requirements, he has over 125 publications. He was inducted into ARS-USDA Science Hall of Fame in 2000; Elected to National Academy of Engineering in 1988; awarded an Honorary Dr. of Science Degree from North Dakota State University in 1988; Elected Honorary Member of the American Society of Civil Engineers (ASCE) in 1988; received the ASCE Tipton Award in 1982 and the American Society of Agricultural Engineers (ASAE) John Deere Gold Medal Award in 1982; the ASAE Soil and Water Engineering Award in 1974; and the ASCE Huber Civil Engineering Research Prize in 1968.

JOHN BREDEHOEFT, Ph.D.

In 1995 John Bredehoeft established the consulting firm—The HydroDynamics Group. He devoted the previous 32 years to public service at the U.S. Geological Survey (USGS). His expertise is in water resources, especially groundwater; he has worked on many aspects of water related problems. During his years at the USGS, he held both scientific research and high-level management positions. In 1994, Bredehoeft retired as a senior research geologist from the Water Resources Division of the USGS.

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Bredehoeft taught one year as a visiting professor at the University of Illinois; and was a consulting professor at Stanford for 8 years, and at the University of California—Santa Cruz, and San Francisco State University for several years. He served on numerous national advisory committees for the National Research Council, the National Science Foundation, and the Department of Energy.

He received numerous awards: member of the U.S. National Academy of Engineering; Editor of the scientific journal, *Ground Water* (1991-95); received both the Horton Medal of the American Geophysical Union (the highest award given to a hydrologist), the Penrose Medal of the Geological Society of America (the highest award given to a geologist), and made a life-member of the National Ground Water Association (their highest award).

TERRY FISKE

Terry is a Ranger for the National Park Service assigned to Death Valley National Park. Terry is responsible for the water supply system at the park. The current water system is old and subject to contamination. Terry is currently reengineering the water system, modernizing it for use in the 21st Century.

ANDY ZDON &
ASSOCIATES, INC.



**TECHNICAL REVIEW SUMMARY- DRAFT SUPPLEMENT TO U.S.
DEPARTMENT OF ENERGY'S ENVIRONMENTAL IMPACT STATEMENT FOR
THE PROPOSED NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE
REPOSITORY AT YUCCA MOUNTAIN, NEVADA**

November 11, 2015

Prepared For:

County of Inyo Planning Department | P.O. Drawer L | Independence, California 93526



Photo by Nancy Good

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November 11, 2015

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- Appendix D Conceptual Cross-Sections – Amargosa River
- Appendix E Predicted Drawdowns by USGS Steady State Carbonate Aquifer Model – Potential SNWA Groundwater Extractions



EXECUTIVE SUMMARY

This technical review summary report (Review Summary Report) was prepared by Andy Zdon & Associates, Inc. (AZI) on behalf of the County of Inyo, Planning Department. The purpose of this report is to provide technical comments related to the “*Supplement to the U.S. Department of Energy’s Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*” (Supplement to the EIS) prepared by the United States Regulatory Commission (NRC), and released August, 2015. This Supplement to the EIS was prepared in response to findings identified in the NRC’s “*U.S. Nuclear Regulatory Commission Staff’s Adoption Determination Report for the U.S. Department of Energy’s Environmental Impact Statements for the Proposed Geologic Repository at Yucca Mountain*”, herein referred to as the Adoption Determination (NRC, 2008).

The Adoption Determination noted that the EISs did not provide a complete and adequate discussion of the impacts on soils and surface materials from a potential future discharge of contaminated groundwater. More specifically, the Adoption Determination noted the following items that should be included (but not necessarily limited to) the following (as quoted from Adoption Determination):

- *NRC Item #1 - “A description of the locations of potential natural discharge of contaminated groundwater for present and expected future wetter periods (for example, as discussed in DOE, 2008, Safety Analysis Report, Section 2.3.1.2);*
- *NRC Item #2 - A description of the physical processes at the surface discharge locations that can affect accumulation, concentration, and potential remobilization of groundwater-borne contaminants; and,*
- *NRC Item #3 - Estimates of the amount of contaminants that could be deposited at or near the surface. This involves estimates of the amount of groundwater involved in discharge or near-surface evaporation, the amounts of radiological and non-radiological contaminants in that water, contaminant concentrations in the resulting deposits, and potential environmental impacts (e.g. effects on biota).”*

In the County’s comments (County of Inyo, 2008) with respect to the EIS (U.S. Department of Energy, 2008), the County raised the following points that needed to be addressed:

- Inyo Item #1 - The full extent of the lower carbonate aquifer, particularly those parts that could become contaminated and how water can leave the flow system should be described;
- Inyo Item #2 - The potential for a decrease or elimination of the upward vertical gradient beneath Yucca Mountain due to future upgradient water-gathering activities (e.g. by Southern Nevada Water Authority);
- Inyo Item #3 - Impacts to Endangered Species that utilize the springs in the region; and,
- Inyo Item #4 - Cleanup and remediation measures should be described.



Addressing all of these points are dependent on a complete description of the conceptual model of the basin. Consideration of work conducted in the Shoshone-Tecopa area since 2010 is absent from the Supplement to the EIS. This work affects the conceptual model employed in the Supplement to the SEIS. Therefore a summary of the conceptual model is provided to present key information for consideration, and to provide context to Section 3.0 summarizing AZI's modeling effort conducted as part of this review.

In summary, our review indicates that the Supplement to the EIS has been non-responsive to each of the items listed in the Adoption Determination and to each of the issues raised by Inyo County. Further, conducting a long-term impact analysis as presented will intrinsically have substantial uncertainties associated with both climate and environmental (including hydrogeologic) changes that can occur over one million years. Based on the lack of updated information presented in the Supplement to the EIS, and errors identified herein, there is a high degree of additional uncertainty attached to the conclusions presented. Although conservative assumptions are presented in the Supplement to the EIS, a full description of the uncertainties attached to such an analysis (and sensitivity analysis) is lacking.

Recommendations are made for future work including a reevaluation of the conceptual model and associated numerical flow and particle tracking modeling. This includes additional data collection including initiating a monitoring program protective of water resources within Inyo County (both in Death Valley and the Shoshone-Tecopa area), and for the development of a groundwater remedial action plan based upon the results of the reevaluation described above.



1.0 INTRODUCTION

This technical review summary report (Review Summary Report) was prepared by Andy Zdon & Associates, Inc. (AZI) on behalf of the County of Inyo, Planning Department. The purpose of this report is to provide technical comments related to the “*Supplement to the U.S. Department of Energy’s Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*” (Supplement to the EIS) prepared by the United States Regulatory Commission (NRC), and released August, 2015. The Supplement to the EIS was prepared in response to findings identified in the NRC’s “*U.S. Nuclear Regulatory Commission Staff’s Adoption Determination Report for the U.S. Department of Energy’s Environmental Impact Statements for the Proposed Geologic Repository at Yucca Mountain*”, herein referred to as the Adoption Determination (NRC, 2008).

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The importance of these items is highlighted by the acknowledgement in the EISs of the likelihood of future discharges of contaminated groundwater to the surface (NRC, 2008). With respect to the Item #1 above, the Adoption Report noted that the following information was needed:

- *“A description of the full extent of the volcanic-alluvial aquifer, particularly those parts that could become contaminated, and how water (and potential contaminants) can leave the flow system”;*
- *“An analysis of the cumulative amount of radiological and non-radiological contaminants that can be reasonably expected to enter the aquifer from the repository, and the amount that could reasonably remain over time”;* and,
- *“Estimates of contamination in the groundwater, given potential accumulation of radiological and non-radiological contaminants. One way to analyze the overall impacts on groundwater may be a mass-balance approach that*



accounts for mass released, the part of the groundwater flow system affected to potential releases, and the expected processes that could affect released contaminants.”

With respect to Items #2 and 3 above, the Adoption Report noted that the following information was needed:

- *“A description of the locations of the potential discharge of contaminated groundwater for present and expected future wetter periods:*
- *A description of the physical processes at the surface discharge locations that can affect accumulation, concentration, and potential remobilization of groundwater-borne contaminants; and,*
- *Estimates of the amount of contaminants that could be deposited at or near the surface.”*

In the County’s comments (County of Inyo, 2008) with respect to the EIS (U.S. Department of Energy, 2008), the County raised the following points that needed to be addressed:

- Inyo Item #1 - The full extent of the lower carbonate aquifer, particularly those parts that could become contaminated and how water can leave the flow system should be described;
- Inyo Item #2 - The potential for a decrease or elimination of the upward vertical gradient beneath Yucca Mountain due to future upgradient water-gathering activities (e.g. by Southern Nevada Water Authority);
- Inyo Item #3 - Impacts to Endangered Species that utilize the springs in the region; and,
- Inyo Item #4 - Cleanup and remediation measures should be described.

As will be discussed in the following sections, substantial hydrogeologic investigative work has been conducted in the Lower Amargosa River (also known as Middle Amargosa Basin) area since 2010 by the U.S. Geological Survey and consultants. This new work which has been funded by the U.S. Bureau of Land Management, Inyo County, Amargosa Conservancy and The Nature Conservancy between 2010 and 2014, has resulted in multiple lines of investigation that have generally converged to a common conceptual model indicating the need for substantive changes to the conceptual model presented in the Yucca Mountain analyses by the U.S. Department of Energy and NRC. This work has not been considered and not incorporated into the analysis presented in the Supplement to the EIS. Much of that new work is summarized in the State of the Basin Report, Amargosa River Basin (Andy Zdon & Associates, Inc., 2014). Upon completion, the State of the Basin Report was widely disseminated to federal, state and local agencies, among others. This work is being published in *Environmental Forensics* (an official journal of the International Society of Environmental Forensics), a peer-reviewed journal (Zdon, Davisson and Love, 2015). A draft proof copy of that article is provided in Appendix A. The final article will be released December 11, 2015 at www.tandfonline/toc/uenf20/current. Additionally, the new conceptual model was presented in May, 2015 at the Devil’s Hole Conference at Ash Meadows National Wildlife Refuge, Nye County, Nevada (Belcher, et. al., 2015).



The new work extended the foundational work demonstrating movement of groundwater from the Nevada portion of the Amargosa Basin feeds the springs in the Death Valley area (King and Bredehoeft, 1999). That this connection had substantial implications regarding radionuclide transport toward those Death Valley springs was subsequently demonstrated (Bredehoeft and King, 2010). More will be discussed regarding these implications in the following sections.

This report addresses each of the issues which have been highlighted in the Adoption Determination and by the County of Inyo by incorporating comments in the context of a conceptual model discussion, as well as in the results of independent modeling using a U.S. Geological Survey-developed numerical model. Section 4.0 summarizes the results of our review of each of the areas where further information is needed.

1.1 Background– Lower Amargosa River

The Amargosa River Basin covers an area of 3,124 square miles in east-central California and west-central Nevada (Figure 1-1). In 2009, the Amargosa River between Shoshone and the terminus of the Amargosa Canyon received Wild and Scenic status through an act of Congress. The Wild & Scenic Amargosa River (Amargosa WSR) is a groundwater dependent river, fed by surfacing groundwater along the river channel and from feeder springs that are tributary to the Amargosa WSR and its approximately 26 miles of perennial flow. Of note is that the Supplement to the EIS does not address potential impacts to this federally-designated WSR. Appendix B provides summaries of portions of the Amargosa WSR and associated springs in the area where all or part of the flows are derived from the Amargosa Desert area in Nevada. The determination that such flows are derived all or in part from the Amargosa Desert is based on geochemistry of the water present. Figures 1-2 through 1-4 show the locations of these and other springs in the area.

The Amargosa River Basin can be subdivided into three basin areas:

- Northern Amargosa Groundwater Basin (Nevada portion of the Basin also referred to as the Amargosa Desert Hydrographic Basin #230 by the Nevada Department of Water Resources);
- Middle Amargosa Valley Groundwater Basin (California); and
- Death Valley Groundwater Basin (California –Nevada).

The Northern Amargosa Valley Groundwater Basin is comprised of the Amargosa River Valley from the river's headwaters northwest of Beatty, Nevada, to the California-Nevada state line. Elevations in this portion of the Amargosa River Basin range from 6,317 feet above mean sea level (ft msl) at Bare Mountain south of Beatty and east of the Amargosa River, to about 2,300 ft msl at the California-Nevada state line near Death Valley Junction, California. The basin is bounded by consolidated rocks of the Yucca Mountain/Pahute Mesa area to the northeast, Bare Mountain on the east, and the Funeral Range to the west. The Northern Amargosa River Basin as defined covers 896 square miles. This is the region of focus in the Supplement to the EIS.



Of note is that the Supplement to the EIS states that the Ash Meadows is in a neighboring basin east of Amargosa Farms, and as such is not a discharge location for groundwater flowing from Yucca Mountain. It should be noted that both Amargosa Farms and Ash Meadows are with the Amargosa Desert Hydrographic Basin (#230) as delineated by the Nevada Division of Water Resources.

The Middle Amargosa Valley Groundwater Basin (also referred to as the Lower Amargosa River Basin in some publications and presentations, Groundwater Basin #6-20 as designated by the California Department of Water Resources) is comprised of the Amargosa River Valley along with Chicago Valley and parts of Greenwater Valley within Inyo and San Bernardino Counties, California. The California-Nevada state line is considered the northern boundary of the Middle Amargosa Valley Groundwater Basin. The elevation of the valley floor generally ranges from about 400 ft msl near Salt Creek in the southern portion of the valley to about 2,300 ft msl at the California-Nevada state line near Death Valley Junction. The basin is bounded by consolidated rocks of the Resting Springs and Nopah Ranges on the east, the Dumont Hills on the south, and the Greenwater Range and Ibex, Black, and Funeral Mountains (collectively known as the Amargosa Range) on the west. The surrounding mountains range in elevation up to 7,335 ft msl at Kingston Peak (within San Bernardino County along the southeast edge of the Basin) and up to 6,725 ft msl at Pyramid Peak, the high point of the Funeral Range to the west. The Middle Amargosa River Basin covers an area of 609 square miles.

The Death Valley Groundwater Basin (Groundwater Basin #6-18 as designated by the California Department of Water Resources) is comprised of the Amargosa River Valley from the Salt Creek area to the sink at Badwater in Death Valley, and northward to the northern physical terminus of Death Valley in Nevada (Oriental Wash Area of the Death Valley Basin as designated by the Nevada State Engineer). Elevations in this portion of the Amargosa River Basin range from -282 ft msl at Badwater, to 11,049 ft msl at Telescope Peak, the highpoint of the Panamint Range along the west side of Death Valley. The combined area of the California and Nevada portions of this lower part of the Amargosa River basin is 1,622 square miles. The springs described in the Supplement to the EIS in Death Valley National Park lie within the Death Valley Basin.

1.2 Land Use

The principal land uses (not including open space and wild lands) in the area are agricultural, recreational, wildlife, livestock and domestic/municipal uses. With increasing solar development, industrial use may increase in the future. Agricultural and domestic water is generally supplied with groundwater from private wells. Water for the town of Shoshone, California is entirely supplied by Shoshone Spring. As will be shown later in this report, spring flow at Shoshone Spring and other springs in the area result in whole or part from groundwater movement southward through the alluvial aquifer from the Amargosa Desert area of Nevada. The town of Beatty, Nevada derives its water from groundwater wells. However, some residents obtain their water solely from spring water. Sewage is generally treated by individual septic systems with the exception of at the communities of Beatty, Nevada, and Shoshone and Tecopa (both in



California) where sewage systems are presently serving some areas. Agricultural land use is primarily crops such as alfalfa (Nevada) and to a much lesser extent dates (California). Recreational uses include the use of spring water at the hot springs in Tecopa, California, and the hot springs northeast of Beatty, Nevada along U.S. Highway 95.

1.3 Hydrologic Activities (2010-2014) – Amargosa River Hydrologic Survey

Prior to 2010, hydrogeologic data collection and analysis were largely absent in the portion of the Amargosa River Basin south of the Nevada-California state line. Assumptions were made regarding groundwater flow into this portion of the Amargosa Basin absent much needed physical data. Most of the assumptions upon which the conceptual model for this portion of the basin was based were the result of residuals or assumed subsurface outflows from investigations of other portions of the flow system, and would therefore be prone to significant error and were speculative at that time.

Beginning in 2010, a considerable amount of hydrologic work has been conducted starting with the initial baseline hydrologic investigations (SGI, 2011 and 2012) that were sponsored by the Amargosa Conservancy. This work has been the result of a cooperative effort funded by the U.S. Bureau of Land Management, Nye County, Nevada, Amargosa Conservancy and The Nature Conservancy. Based on our review of the Supplement to the EIS as described earlier, this work has not been considered, and/or incorporated into the analysis. Such consideration and/or incorporation is necessary. That work over the past five years has included the following:

- Geochemical analysis (anions, cations, and metals) along with stable and unstable (uranium and strontium) isotope, noble gas, and radiocarbon analyses on springs, wells, and the Amargosa River;
- Periodic river gaging at several locations along the Amargosa River;
- Periodic spring flow and groundwater level measurements at springs and wells throughout the Middle Amargosa River Basin;
- Installation of four shallow monitoring wells 1) north of Shoshone along the Amargosa River, 2) along Willow Creek, 3) at Twelvemile Spring, and 4) at “Married Man’s Camp” between Willow Creek and California Valley. This work included sampling and analyzing waters from those wells and outfitting those wells with transducer/data logger installations and periodic groundwater level data downloading (JWI, 2012 and JWI, 2013a);
- Refined geologic mapping being conducted by the USGS;
- Geophysical surveys by the USGS at selected locations throughout the Middle Amargosa Basin area;
- An in depth synoptic canvassing of the flow in the Amargosa River by the USGS to evaluate gaining and losing character of the River (conducted in February, 2014);



- Initiation of evapotranspiration studies along the Amargosa River in the Shoshone – Tecopa area (USGS – in progress); and,
- Development of a new, steady-state numerical groundwater flow model that simulates the Amargosa River region in the context of modeling flow throughout the carbonate rock aquifer system throughout the Great Basin (completed and published in 2014).

In addition, additional sampling and analysis was conducted to evaluate a source of water for potable water and fire suppression for the Tecopa – Tecopa Hot Springs community (JWI, 2013c). The extent of this data collection is an indication of the degree to which data were lacking in the area prior to 2010. The new work has highlighted an increased southward flow component from the Amargosa Desert than was previously estimated. For example, if it is assumed that flows from Shoshone Spring and Borax Spring west of the Amargosa River are between 500 and 1,000 gallons per minute of discharge (not including other discharges in the area) this discharge data, when considered in combination with new geochemical data that show that the discharge is largely derived from the groundwater underflow from the north, substantially increases the estimate of underflow into the Shoshone-Tecopa subregion above previous estimates. Therefore, substantially more flow must enter the subregion from the north to balance these groundwater discharges.

1.3.1 Results - Geochemistry

Of the work described above, geochemical analyses have been among the most informative. Although described in Section 2.0 (conceptual model), a summary of the geochemical results is presented here as well. A detailed description of the investigative results are provided in the report prepared by M.L. Davisson & Associates, Inc., and provided in Appendix C.

Stable isotope and other geochemical data indicate that Middle Amargosa River area groundwater appears to be a mixture of Ash Meadows (primarily from alluvium that is a mixture of waters derived from flow and/or recharge in the carbonate rock aquifer, volcanic rocks of the upper Amargosa River Basin, and the alluvial basin fill of the Amargosa Desert area), Spring Mountains and Kingston Range sources (Figures 1-5 and 1-6). The pathways (Figure 1-7) for that groundwater moving from the Pahrump Valley area to reach the area probably consist of one or a combination of:

- Water that moves through carbonate rocks from the Spring Mountains to the Ash Meadows and Amargosa Desert area, then southward toward the Shoshone-Tecopa area;
- Water that moves through carbonate rocks beneath the northern portion of the Nopah Range into Chicago Valley, then toward the Amargosa River;
- Water that moves from Pahrump Valley through the low, faulted divide into California Valley then towards the River; and,



Most of the spring/groundwater samples have characteristics indicative of having been influenced by Spring Mountain recharge by some route with western springs such as Shoshone and Borax being the least influenced by sources to the east (including the Spring Mountains) and most influenced by a source to the north. Most of the mixing is probably occurring via fractured rock at depth, and less so in the alluvium. Water quality in the springs in the Shoshone-Tecopa area likely evolves from a mixture of regional carbonate and Tertiary volcanic rock influences, but acquires increased chloride and sulfate possibly from the Tecopa lake bed deposits. Additionally, regional subsurface heat flow increases groundwater temperature and contributes to increased dissolved silica, decreased bicarbonate, and possibly increased pH, with the latter resulting in the high arsenic concentrations. The source of the arsenic could be from multiple sources, but as pH increases the solubility increases to significantly high levels as presented on Figure 1-8.

Noble gas concentrations of the water in the Shoshone-Tecopa area are strongly similar to those measured in the Ash Meadows area (Amargosa Desert of southern Nevada) groundwater noted by Thomas, et.al. (2003b). Their conclusions were that dissolved gas loss occurred during subsurface transport across faulted boundaries and compromised recharge temperature/elevation calculations. The noble gas recharge temperatures/elevation calculations for Amargosa River Valley groundwater mostly support the conclusions of Thomas, et.al. (2003b).

The $^3\text{He}/^4\text{He}$ ratios for the four measured springs (Thom, Wild Bath, Tecopa and Borehole) were unusually low, indicating old groundwater ages. The values were 5 to 10 times lower than measured groundwater under the Nevada Test Site. These low ratios could be due to high influx of ^4He from the Earth's crust caused by deep faults. Otherwise, if the low ratio is due to steady-state accumulation from local deposits, then groundwater ages greater than 100,000 years would be required. Additionally, the helium ratios did not suggest the presence of a shallow magmatic heat source for the Tecopa Hot Springs area, and indicate that the heat source is via deep circulation, probably along the faults that run through the area. The elevated temperature of the Tecopa Hot Spring water is not unusual since similar temperatures are seen at depth under the Nevada Test Site. However, at Tecopa, the warm water is driven to the surface probably by some structural control.



2.0 GROUNDWATER SYSTEM – CONCEPTUAL MODEL

The conceptual model of a groundwater system is the foundation of any analysis of a groundwater basin. The conceptual model describes groundwater occurrence, groundwater movement, hydraulic properties of aquifer materials, and groundwater inflow and outflow components. As new data have been gathered in the Middle Amargosa Basin since 2010, the conceptual model for the area has been updated as appropriate to reflect those data. This section provides an updated overview of the conceptual model reflecting the results of new geochemical data, groundwater level data, and river gauging results in the context of responding to the Supplement to the EIS.

As described earlier, the Adoption Determination noted the following items that should be included (but not necessarily limited to) the following (as quoted from Adoption Determination):

- *“A description of the locations of potential natural discharge of contaminated groundwater for present and expected future wetter periods (for example, as discussed in DOE, 2008, Safety Analysis Report, Section 2.3.1.2);*
- *A description of the physical processes at the surface discharge locations that can affect accumulation, concentration, and potential remobilization of groundwater-borne contaminants; and,*
- *Estimates of the amount of contaminants that could be deposited at or near the surface. This involves estimates of the amount of groundwater involved in discharge or near-surface evaporation, the amounts of radiological and non-radiological contaminants in that water, contaminant concentrations in the resulting deposits, and potential environmental impacts (e.g. effects on biota).”*

Addressing all of these points is dependent on a complete description of the conceptual model of the basin. As described earlier, the work conducted in the Shoshone-Tecopa area since 2010 is generally absent from the Supplement to the EIS. Therefore a summary of the conceptual model is provided to present key information for consideration, and to provide context to Section 3.0 summarizing AZI’s modeling effort conducted as part of this review.

The description of the hydrogeology of the Amargosa Basin south of Alkali Flat in the Supplement to the EIS is incorrect and fails to recognize the “small, intermittent” springs present as being the perennial, substantial springs that they are (see summaries in Appendix B). In that conceptual model, there is no mention of the springs of note, the extent of surface flow in the Amargosa River (which is incorrectly characterized as five miles in the Supplement to the EIS) or reference to work conducted since 2010 in that part of the basin, or even work conducted previously (e.g. Rose and Davisson, 1996), and that work’s implications to the basin conceptual model.

2.1 Regional Setting and Geologic Conditions

The Amargosa River Basin is located in Inyo and San Bernardino Counties, California, and Nye County, Nevada within the Basin and Range geomorphic province. The Basin and Range region is characterized



by basins of internal drainage with considerable topographic relief, alternating between narrow faulted mountain chains and flat arid valleys or basins. The ranges generally trend north-northwest parallel to the regional structural regime. The geology of the Amargosa Basin is very diverse containing Precambrian, Paleozoic and Mesozoic metamorphic and sedimentary rocks, Mesozoic-aged igneous rocks, Tertiary and Quaternary-aged volcanic rocks, and playa, fluvial and alluvial deposits (Planert and Williams, 1995). A regional geologic map is provided on Figure 2-1.

The valley areas are covered by coalescing alluvial fans forming broad slopes between the surrounding mountains and the valley floors. The regional gradient of the Northern Amargosa River Basin is generally to the south-southeast with gradients that typically range from five to 15 feet per mile. The basin fill deposits are interpreted to be underlain primarily by Paleozoic sediments although in the central portion of the basin floors, the basin fill sediments have not been fully penetrated by drilling. Generally, the Middle Amargosa Basin is marked by several unique features including the badland-type topography of the Tecopa lakebed deposits and the Amargosa River Canyon. Between Shoshone and Tecopa the slope of the valley floor flattens among the lakebed deposits, and then steepens as the river flows through the Amargosa River Canyon. Downstream of the canyon, the topography reverts to an area of broad, coalescing alluvial fans, eventually reaching the flat playa in Death Valley.

2.2 Hydrogeologic Units

In the Amargosa River Basin, the principal hydrogeologic units consist of unconsolidated basin fill materials, volcanic rocks (primarily in Nevada), and the carbonate rock aquifer. The following provides a summary of these three hydrogeologic units.

2.2.1 Basin Fill

Tertiary and Quaternary-aged basin fill deposits are present throughout the basin as alluvial, fluvial and lacustrine (lakebed) deposits. Coarse-grained deposits (primarily sand and gravel) within the basin fill are responsible for transmitting the greatest quantities of groundwater and are most relied upon for groundwater production in the region. The basin fill is generally unconsolidated, moderately to well-sorted sand, gravel, silt and clay, and wells completed in the basin fill can yield several hundred gallons per minute (Walker and Eakin, 1963). As the axes of the valleys are reached, the sorting of the sediments will increase which can serve to significantly increase the permeability of the sediments. With increasing depth, groundwater production can be expected to decrease in these deposits as increasing lithostatic pressure and infilling of pores coincident with their greater age may occur reducing permeability.

Within the basin fill, the fine-grained (clay and silt) deposits that largely comprise the lakebed deposits (for example in the Shoshone – Tecopa area) serve as aquitards. Aquitards are low permeability geologic units that inhibit groundwater flow and can serve as confining units. Wells and boreholes that are completed in aquifer materials underlying these aquitards may exhibit artesian conditions such as those



observed from flowing wells and borings such as at Borehole Spring and Borax Spring in the Shoshone-Tecopa area.

2.2.2 Volcanic Rocks

For this review, the volcanic rocks are of key importance as the proposed repository at Yucca Mountain would store the nuclear fuel and high-level radioactive waste within these rocks. Groundwater movement from these rocks into the alluvial aquifer is of key importance, particularly since many of the springs and a portion of the Amargosa WSR flow is derived from the volcanic-alluvial aquifer system in the northern part of the Amargosa Basin.

Tertiary and Quaternary-aged volcanic rocks are present within the Amargosa River Basin particularly in the area of the headwaters of the Amargosa River in the Yucca Mountain and Beatty areas of Nevada, and in the Greenwater Mountains immediately west of Shoshone, California. In the California portion of the basin, the volcanic rocks are generally of lesser importance to the overall groundwater system as opposed to the northern portion of the basin in Nevada. However, locally, volcanic rocks can be of importance, for example, at the Shoshone Spring area where a basalt flow crossing the Amargosa River course appears to be driving water to the surface in the river bed resulting in the spring. This will be discussed further in Section 2.2.5.

2.2.3 Bedrock Units

Bedrock units underlying the alluvial valleys and generally comprising ranges such as the Nopah and Resting Spring Ranges, and portions of the Amargosa Range, consist of Precambrian to Mesozoic-aged metamorphic and sedimentary rocks. These geologic units consist of Paleozoic-age carbonate rocks (the “carbonate rock aquifer”); quartzite, and shale which have been folded and faulted (Figure 2-1). Generally, bedrock units such as these produce little water except where they are fractured and faulted, providing pathways for groundwater movement. Other bedrock units consist of the Mesozoic-aged granitic rocks as found in the Kingston Range. Within the granitic rocks, groundwater flow can be assumed to be negligible except where fracturing is present yielding modest quantities of groundwater.

Where carbonate rocks are present, greater movement of groundwater can occur due to the unique depositional and erosional characteristics of those rocks. Fractures and secondary solution openings along bedding planes can transmit considerable quantities of groundwater. Groundwater that discharges from the springs at Ash Meadows largely involves groundwater moving through these secondary openings in the carbonate rocks. Within the basin, significant groundwater flow through the carbonate rock aquifer occurs within the lower to middle Paleozoic-age carbonate rocks that comprise a package of rocks approximately 26,000 feet thick (Sweetkind, Belcher, et.al., 2004).

Groundwater flow in carbonate rocks can be very complex. Carbonate rocks with extensive solution channels or fractures primarily developed in one direction will have permeabilities that are highly oriented in specific directions. Therefore, the groundwater flow may not be predictable simply by drawing flow



lines perpendicular to regional groundwater surface contours representative of the regional carbonate aquifer (Davis & DeWiest, 1966). Although the carbonate rock aquifer likely transmits large volumes of groundwater in the region, permeability is limited to areas of fracturing which proportionally makes up a small portion of the carbonate rock volume. Therefore, despite the potential for wells to obtain large yields from the carbonate rocks, that success is dependent on intersecting those fractured zones.

2.2.4 Geologic Structure

The rocks in the Amargosa River Basin have been extensively deformed by a variety of fault types that have occurred in the distant past as well as the present. These fault types include:

- Normal faulting typical to the Basin and Range with vertical displacement being dominant;
- Strike-slip faulting (lateral displacement dominant) typical of larger-scale regional fault systems such as the Furnace Creek – Fish Lake Valley Fault and Las Vegas Valley Shear Zones; and
- Thrust faults (low angle faults) that during the Paleozoic and Mesozoic resulted in displacing rock units in a manner that can affect groundwater movement in the present.

Springs may issue from the locations of faults due to either the lower fracture permeability of the fault in rock, or the displacement of permeable basin fill or rock adjacent to relatively impermeable materials. For example, Tecopa Hot Springs rise along a fault (Waring, 1915) that runs north-northwest through the basin (Figure 2-2). This fault is a part of the Furnace Creek Fault Zone (CDMG, 1994). Shoshone Spring also rises along the northward extension of the same fault that passes through Tecopa, part of the Furnace Creek Fault Zone (California Division of Mines, 1954). The Death Valley – Furnace Creek Fault System (inclusive of the Furnace Creek Fault Zone) is part of a large, currently active, northwest directed pull-apart zone. Movement along the Furnace Creek Fault Zone is primarily strike-slip (Brogan, Kellog, Slemmons and Terhune, 1991). The Death Valley – Furnace Creek Fault System is the second longest fault system in California (the San Andreas Fault System being the longest).

Thrust faults are present throughout the region, however given their age, in many areas their presence is concealed by overlying volcanic or basin fill deposits. Fracture permeabilities along thrust faults are insignificant due to the age of the structures and fracture filling and the low angle nature of the faulting not supporting fractures with significant apertures. However, in areas where impermeable rocks are thrust against more permeable rock in the subsurface (e.g., quartzite thrust against carbonate rocks), those faults may also serve as a barrier to groundwater flow. This can be seen along the base of the Nopah and Resting Spring Ranges where the carbonate rock sequence outcrops in the upper portions of the ranges and underlying Lower Cambrian and Precambrian clastic rocks outcrop along the base of each of these ranges. A notable exception is north of the Nopah Thrust in the northern portion of the Nopah Range. North of this fault, the carbonate-rock sequence is down-dropped relative to the carbonate rocks south of the thrust fault resulting in a potential pathway for an undetermined amount of water to seep from Pahrump Valley into Chicago Valley. Of note is the presence of Twelvemile Spring situated



approximately west of this thrust fault, and an absence of springs along the west base of the Nopah Range further south.

2.2.5 Implications of Geologic Structure and Impact Analysis Time-Frame

A key aspect of the analysis presented in the Supplement to the EIS is the one-million-year timeframe used for the impact analysis. Although anticipated climate change scenarios for the impact analysis time-frame are provided in great detail, there appears to be little attention to physical changes to the hydrogeologic system over that time-frame.

As described earlier, the extensional geologic environment that has led to the current basin and range (block-faulted) topography began approximately 10 to 13 million years ago. Therefore, the impact analysis time frame accounts for a future timeframe that is significant in relation to overall age of the basin and range topography we see today. This is a seismically active region with significant slip rates on faults. For example, the Death Valley – Fish Lake Valley Fault Zone has a slip rate of 4-5 millimeters per year depending on the segment (Peterson, Bryant, et.al., 1996) which extrapolated over one million years results in offset of approximately four kilometers for that fault alone over a one million year period. Considering the numerous faults throughout the area of the flow system, over the one-million year time frame, significant horizontal and vertical displacements are likely to affect flow paths to some extent. The uncertainty that this ongoing deformation adds to the resulting analysis presented in the Supplement to the EIS should be noted.

2.3 Surface Water

The Amargosa River rises as spring flow from the southwest side of Pahute Mesa in Nevada. From here, the river flows generally southwest toward Beatty, Nevada, and after passing through the Amargosa Narrows where water is forced to the surface, enters the Amargosa Desert. After crossing the border into California, the river generally runs southward along a valley that follows the trend of the Furnace Creek Fault Zone, adjacent to California State Highway 127 near Death Valley Junction. Here, the river meets with Carson Slough (which drains Ash Meadows and is the chief tributary to the Amargosa River in Nevada), and continues its southward route passing to the east of the community of Shoshone and on to Tecopa. South of Tecopa, the river enters the Amargosa Canyon, being augmented by spring flow on its course. South of the Amargosa Canyon, the river flows by Dumont Dunes, and then heads west and then northward, rounding the Amargosa Range on the south and flowing into Death Valley.

The Supplement to EIS incompletely, and incorrectly characterizes Amargosa River flow along the portion of the Amargosa River in Inyo County that has been designated by Congress as Wild and Scenic (e.g., see Page 2-22, lines 22 through 24 in the Supplement). The characterization is incorrect in that:

- It incorrectly characterizes the Amargosa River as having only five miles of surface flow (instead of approximately 26 miles);



- It fails to recognize the designation of the river as Wild and Scenic;
- It fails to describe the river flow as observed (both in surface water flow and evapotranspiration discharges) in the Shoshone area; and,
- It fails to describe the feeder springs that supplement river flow.

As described in the State of the Basin Report (Andy Zdon & Associates, 2014), the principal surface water body in the region is the Amargosa River, an intermittent river with headwaters issuing from springs northeast of Beatty, Nevada inclusive of the Yucca Mountain area, and extending approximately 180 miles to the river's terminus at the playa in Death Valley. Except for portions of the river south of Shoshone, California, and near Beatty, Nevada, the Amargosa River typically flows on the surface only after periodic storms. In those areas where the river is usually dry, the flow of water is in the subsurface as observed in the Shoshone area when surface flow is commonly not present but where substantial phreatophytic vegetation is supported by the subsurface flow. The perennial reach of the Amargosa River between Shoshone and Dumont Dunes was designated as a National Wild and Scenic River in 2009. Except during runoff events from rainstorms, the perennial flow in the Wild and Scenic section of the river is completely supplied by groundwater.

A series of conceptual cross-sections following the course of the Amargosa River from near Oasis Mountain northeast of Beatty, Nevada, to Sperry below the Amargosa River Canyon in California are provided in Appendix D. As can be seen, areas with continual flow are typically where rock units create constrictions to flow, and that flow is driven to the surface. Beyond the constrictions, the flows typically percolate into the subsurface some distance downgradient. This occurs at the narrows southeast of Oasis Mountain, at the Amargosa Narrows south of Beatty, Nevada, at the Shoshone Spring area, and at the Amargosa River Canyon. Between Shoshone and Tecopa, the river can also rise to the surface, most likely the result of permeable zones intersecting clayey, Tecopa lake bed deposits causing flow to surface. As can also be seen in the cross-sections (Appendix D), the groundwater surface tends to flatten upgradient of these constrictions, then steepens once past them, as would be anticipated.

With respect to the contributions of flow from the Amargosa Desert, these cross-sections also illustrate how groundwater in the alluvial aquifer (inclusive of flows from both volcanic and carbonate sources) flows southward from the Amargosa Desert in Nevada toward Shoshone and Tecopa in Inyo County. The cross-section representing flow from the Eagle Mountain area, toward monitoring ARHS-01 toward Shoshone Spring also is included in (Belcher, et. al., 2015).

This condition also emphasizes the sensitivity of the relatively constant, or perennial reaches of the Amargosa River to changes in groundwater level and possible water quality impacts resulting from releases in either the carbonate or volcanic-alluvial aquifer systems. Additionally, given this condition, it appears that a considerable portion of the underflow moving through the Middle Amargosa system can be accounted for by the flow observed at the surface (for example in the Amargosa River canyon) plus



spring discharge and any pumping. This does not result in a substantial amount of underflow, and further highlights the sensitive nature of the river system.

The USGS monitors the flow of the Amargosa River (USGS, 2013) at a gage 0.2 miles west (Gauge no. 10251300) of Tecopa. The USGS has monitored Amargosa River flow intermittently at other locations along the river over the past 50 years, but given the spotty nature of those records, they are of limited utility. The average flow of the river at this station based on 39 full years of data between 1962 and 2013 (some years missing) is 3.44 cubic feet per second (cfs), though is skewed high as a result of flood flows. The maximum mean annual flow recorded there was 14.9 cfs in 1983 when the record peak flow of 10,600 cfs was recorded on August 16, 1983. At times the river has been dry at this station. Mean annual flows at the Tecopa station along with the other stations mentioned are summarized on Table 2-1.

Other surface water bodies in the area consist of spring-fed ponds in the Ash Meadows area (Nevada), spring-fed Grimshaw Lake in the Tecopa area, and streams that issue from springs only to end where either that flow is utilized by vegetation, or it percolates back into the subsurface. One exception to this is Willow Creek, a significant spring-fed stream that rises northeast of China Ranch (south of Tecopa), and flows into the Amargosa River within the Amargosa River Canyon.

Finally, surface flows emanating from springs may flow towards, and discharge directly to the Amargosa River (for example multiple springs in the Amargosa Canyon) or may contribute to river flow after those waters have percolated back into the subsurface. Elsewhere spring flows can either evaporate or be transpired by vegetation. Given the scope of the comments in this review and work completed since 2010, a more detailed description of spring flow at Shoshone Spring is provided in the following section.

2.4 Regional Groundwater System

The regional groundwater flow system is considerably more extensive than the Amargosa River Basin watershed. The reason for this is the extensive area beyond the watershed boundary underlain by the carbonate rock aquifer that drains toward Death Valley (Bredehoeft and King, 2010, Belcher, 2004). In this large flow system, groundwater recharge results from precipitation in the form of snowmelt and rainfall that falls within the mountains of southern and central Nevada, and reaches the Amargosa River Basin where it is discharged (Planert and Williams, 1995).

The Northern Amargosa River Basin in Nevada appears to receive much of its carbonate-rock aquifer underflow from central Nevada. As shown on Figure 2-3, groundwater moves southward through Lincoln County, Nevada and beyond where it splits with a portion of that flow heading southwest toward the Amargosa Desert and Ash Meadows. The remainder of the flow moves southeast toward Muddy Spring and the Colorado River area.

Within the Middle Amargosa River Basin (between the California-Nevada state line and Salt Creek – also referred to as the Lower Amargosa River in Belcher, et.al., 2015), the river has long been postulated that groundwater moves directly through the carbonate aquifer southwest from the Spring Mountains and



beneath Pahrump Valley toward the Tecopa – Shoshone – Chicago Valley – California Valley areas (Faunt, D’Agnese and O’Brien, 2004). However, based on the results of the current geochemical analyses and more recent detailed mapping by the USGS (Workman, et.al., 2002), it appears that the mechanism by which groundwater moves from the Spring Mountains/Pahrump Valley area toward the Shoshone-Tecopa area may be more complicated. Figures 2-4, 2-4a and 2-4b present a portion of the 2002 geologic map indicating that Precambrian to Cambrian bedrock units underlying the carbonate rock units outcrop along the western base of the Resting Spring Range and the portion of the Nopah Range south of the Nopah Peak Thrust. This would indicate that the saturated rocks beneath these ranges are primarily comprised of quartzite, shale, siltstone and dolomite of lesser permeability than would be expected of the Paleozoic-age carbonate rocks. Alternative flow paths likely include one or more of the following:

- Spring Mountain recharge moving toward Ash Meadows through carbonate rocks and basin fill, then southward toward the Shoshone-Tecopa area;
- Via carbonate rocks at the north end of the Nopah Range into Chicago Valley then toward the Amargosa Valley;
- From Pahrump Valley via the shallow divide into California Valley then toward the Amargosa River; and,
- Groundwater that moves from Pahrump Valley toward Ash Meadows and the Amargosa Desert, discharges to alluvium, and moves southward toward the Shoshone-Tecopa area.

The deeper flowpaths are most likely influential on the spring flows and discharge to the alluvium. The deeper flowpath beneath the northern Nopah Range was previously discussed (JWI, 2013a) as a potential source for Twelvemile Spring. These flowpaths are consistent with that previously proposed by others (Figure 2-5). Beyond the Middle Amargosa River Basin, groundwater moves west in the Death Valley Basin, then north augmented by underflow from the Owlshhead Mountains area, to the Death Valley Playa.

The regional groundwater flow system covers an area of nearly 40,000 square miles. The following sections describe the occurrence and movement of groundwater, the aquifer characteristics of the basin fill and carbonate rock aquifers, and groundwater basin inflow and outflow components.

2.4.1 Groundwater Occurrence and Movement

Within the Amargosa River Basin, groundwater occurs primarily within the basin fill deposits (inclusive of the volcanic rocks) and carbonate rock aquifer. In the Northern Amargosa River Basin, groundwater is generally found within the basin fill from which most of the groundwater pumping in the Amargosa River Basin is concentrated. In the Ash Meadows area, the primary aquifer is the carbonate rock aquifer system. Groundwater within the carbonate rocks flows laterally across basins as interbasinal flow as described earlier. Further north (from Beatty, Nevada north) volcanic rocks are prominent and can provide significant flow where fractured.



The Supplement to the SEIS relies upon a hydraulic gradient west of Ash Meadows as a basis for stating on Page 2-11 that the “...*steep hydraulic gradient across the north-south trending fault indicates that little mixing of carbonate waters to the east (at Ash Meadows) with alluvial waters to the west in the present day climate.*” There appears to be uncertainty as to the effectiveness of this barrier to flow however, as the ruling by the Nevada State Engineer concerning Devil’s Hole (which recognizes the hydraulic connectivity between these two areas) is designed to protect Devil’s Hole (in the Ash Meadows area) from the effects of existing and future pumping in the Amargosa Desert.

The direction of groundwater movement usually parallels the slope of the ground surface, from points of recharge in the higher elevations to points of discharge such as springs or the Amargosa River in the valley. Within the basin fill aquifer, groundwater movement is from north to south from the northern portion of the basin in Nevada toward Shoshone and Tecopa. A potentiometric surface map of the shallow basin fill aquifer based on the groundwater levels collected by the USGS, AZI, AC, Nye County and Inyo County (by TEAM Engineering & Management, Inc.) during the 4th Quarter of 2010 is provided on Figure 2-6. This is the same map that was provided in the 2011 State of the Basin Report (Source Group, 2011). Based on the continued monitoring of groundwater levels in the area since that time, and the little change observed south of Death Valley Junction, this map is likely still consistent with existing conditions.

Precipitation and snowmelt runoff from the mountains surrounding the Middle Amargosa River Basin collect in the thick packages of alluvium that fill the valleys. The water percolates through the alluvium under the force of gravity, flowing downhill towards the lowest point in the Basin, the Amargosa River. Figure 2-7 shows the conceptualized flow paths of groundwater flowing in the alluvial valleys within the Middle Amargosa River Basin. North of Shoshone, groundwater flows south around Eagle Mountain in the alluvium that forms the floor of the valley through which runs the Amargosa River.

The valley and the Amargosa River are additionally fed from runoff from the east slope of the Amargosa Range and the west slope of the Resting Spring Range. Water from the east slope of the Resting Spring Range and the west slope of the Nopah Range flow into Chicago Valley, following the slope of the valley floor to the south. At the south end of the Resting Spring Range, the alluvial valley turns southwest towards Tecopa and the Amargosa River. Right at this bend is Resting Spring, which likely exists as a result of the change in valley direction and the constriction in the width of the alluvium in the valley between the Resting Spring Range and the Nopah Range, forcing groundwater to the surface at the spring location. Water from the southeastern slope of the Nopah Range and the western slope of the Kingston Range flows into California Valley and west around the southern tip of the Nopah Range. Some of this water likely flows down China Ranch Wash, which in turn is the source of the water from Willow Spring and Willow Creek.

Runoff from the eastern Ibex Hills flows into Greenwater Valley toward the Amargosa River. South of the Sperry Hills, runoff from the north facing slope of the Avawatz Mountains, along with the Salt Spring



Hills, Saddle Peak Hills and the Ibex Hills flows into the basin fill of Southern Death Valley, down the middle of which runs the Amargosa River.

Based on the results of AZI's spring reconnaissance, it is clear that a number of distinct spring sources are represented in this concentrated part of the Amargosa River Basin. Based on the current isotopic work, the elevated temperatures of the hot springs around Tecopa indicate that the spring water has most likely been at great depth. This is similar to warm springs in the Furnace Creek area of Death Valley National Park (Pistrang and Kunkel, 1964). The Furnace Creek area warm springs are also present along the Furnace Creek Fault Zone where deep circulation is postulated. This indicates that absent shallow heated igneous rocks, those waters moved at considerable depth (in the range of thousands of feet below ground surface) only to move upward along fractures or faults to the surface where it is discharged. In other springs, field water quality parameters are suggestive of groundwater flow of a more local nature such as at Crystal Spring (Kingston Range source) or Sheep Creek Spring (Avawatz Mountains source).

2.4.1.1 Groundwater Movement toward Shoshone Spring

The Supplement to the SEIS provides seemingly contradictory assumptions as described before concerning flow paths from the Amargosa Desert and Ash Meadows as described above in Section 2.4. As an example of groundwater movement from the Amargosa Desert –Ash Meadows area toward the Shoshone-Tecopa area, a description of Shoshone Spring, and its sourcing is provided below. Shoshone Spring is a key spring within the Inyo County portion of the Amargosa Basin and is the sole source of water for the town of Shoshone.

As shown in the conceptual cross-sections provided in Appendix D, Amargosa River reaches with continual surface flow are typically where rock or other low permeability soil units create restrictions to flow, and that flow is driven to the surface. Beyond the constrictions, the flows typically percolate into the subsurface some distance downgradient. With respect to the contributions of subsurface flow from the Amargosa Desert, these cross-sections also illustrate how groundwater in the alluvial aquifer (inclusive of flows from both volcanic and carbonate sources) flows southward from the Amargosa Desert in Nevada toward Shoshone and Tecopa in Inyo County. Of note is the attached cross-section inclusive of data from monitoring well ARHS-01 and Shoshone Spring. This southward groundwater movement in alluvium is also presented in the potentiometric surface map prepared in 2011 (Source Group, 2011). Additional contributions of groundwater from Pahrump Valley (sourced in the Spring Mountains to the east) contributes flow. That flow path may be from Pahrump Valley, northwestward toward the Ash Meadows/Amargosa Desert area, then south toward Shoshone. Further work would be required to refine that flow path.

It had long been thought that groundwater between Death Valley Junction and Shoshone ran shallow beneath the often dry Amargosa River channel. In order to test this concept, Monitoring Well ARHS-01 was installed during May 2012 approximately 4.5 miles north of Shoshone, California (Johnson Wright, 2012). During drilling, dry to moist soils consisting of approximately 40 feet of coarse-grained fluvial



deposits and nearly 100 feet of fine-grained lakebed deposits were identified prior to encountering a zone of saturated sandy gravel at approximately 138 feet below ground surface. Within the well casing, groundwater rose to a depth of approximately 111 feet below ground surface after well construction was complete. Additionally, water from that well was found to be approximately 35 degrees Celsius (similar to Shoshone Spring), suggesting that the fault that runs along the axis of the Amargosa River (through Tecopa and Shoshone, and then north towards Eagle Mountain) may provide a connection to, and distribution system for, a deeper source of water.

Water quality analyses that included general chemistry, metals, stable isotope, and noble gas analysis indicated that these waters not only were similar in character to those waters that issue from Shoshone Spring (and Borax Spring to the south), but that their recharge areas were likely similar as well. The recharge area includes groundwater derived from both carbonate and volcanic sources that discharge to alluvium in the Amargosa Desert – Ash Meadows area of Nevada. From this recharge area, groundwater moves southward in the alluvium toward Shoshone (Andy Zdon & Associates, 2014).

As shown in the attached cross-section, the groundwater encountered in the saturated river gravels at ARHS-01 likely daylight near Shoshone Spring in an area where an existing basalt flow crosses the river channel from west to east. Free-flowing spring(s) are present at Shoshone Spring along with adjacent areas of discharge as evapotranspiration from phreatophytic vegetation elsewhere in the absence of surface water flow. Downgradient (south) of the basalt flow, additional free flowing spring flow occurs where faulting has provided a conduit for that flow to surface.

South of the town of Shoshone, phreatophytic vegetation consisting of mesquite, willow and other vegetation begin to diminish until that surface water infiltrates back into the river bed, moving southward toward Tecopa.

2.4.2 Aquifer Characteristics

Groundwater within the basin is held within the sand, gravel, silt and clay that make up the valley fill aquifer. Within the Northern Amargosa River Basin, hydraulic conductivity (the ability for a geologic material to transmit water) in the basin fill can range from 0.02 feet per day (f/d) in the low permeability clayey deposits, to 140 f/d in the coarse-grained sands and gravels (Belcher, 2004). AZI is unaware of any aquifer testing that has occurred within the basin fill in the Middle Amargosa River Basin or the Death Valley Basin, but it is likely that hydraulic conductivities generally fall within the same range as those described above.

The aquifer characteristics of the carbonate rock aquifer can be highly variable. Where fractures and solution openings exist, these rocks can be the most permeable materials in the basin. Absent fracturing, hydraulic conductivities can be extremely low. Carbonate rock hydraulic conductivities can range from 30 f/d or greater to much less than 0.001 f/d (Spitz & Moreno, 1996). The implications of orders-of-magnitude scale changes in hydraulic conductivity in very short geographic distances is discussed further in Section 3.0.



2.4.3 Groundwater Basin Inflow Components

Groundwater inflow components within the Amargosa River Basin include recharge from precipitation that falls within the drainage basin and groundwater underflow into the basin, primarily through the carbonate rock aquifer. In this area, large uncertainties exist regarding recharge rates, and currently, groundwater pathways for underflow into the basin. Therefore, best estimates of recharge are probably most available by evaluating groundwater discharge and changes in storage/changing groundwater levels in the area.

2.4.3.1 Recharge

Walker & Eakin (1963) estimated recharge to the Northern Amargosa River Basin from precipitation within the basin plus recharge from precipitation on the northern and western slopes of the Spring Mountains to be approximately 5,000 acre-feet per year (AFY). Within the California portion of the basin, the Middle Amargosa Basin and Death Valley Basin do not have specific recharge estimates associated with them (California Department of Water Resources, 2003).

As part of the water-supply feasibility study for a potable water source for Tecopa, JWI (2013c) estimated a recharge of approximately 700 afy from the Kingston Range using the Maxey-Eakin Method.

2.4.3.2 Groundwater Underflow

Walker & Eakin (1963) estimated that of the 17,000 AFY discharged from the springs at Ash Meadows on an annual basis; approximately 13,000 AFY might be the result of groundwater underflow through the carbonate rocks from the Spring Mountains to the east. The remaining 4,000 AFY being supplied by underflow from areas to the northeast in central Nevada. South of Death Valley Junction, the general absence of previous hydrogeologic investigations in the Shoshone – Tecopa region results in more generalized assumptions regarding underflow. Although a flowpath from Nevada towards the Death Valley area has been demonstrated by Bredehoeft and King, and others, as shown in Figure 2-7, regional groundwater flow in the basin fill enters the California portion of the basin from Ash Meadows, Oasis Valley, Jackass Flats and from recharge in the Spring Mountains via various potential routes. Additional underflow from the south from the Silurian Valley area enters the system between the Amargosa River Canyon and Saratoga Springs (Faunt, D’Agnese and O’Brien, 2004).

With respect to the Middle Amargosa River Basin, the existing Death Valley Regional Flow System model could be used to evaluate the groundwater budgets for specific zones in this part of the groundwater system, therefore extracting underflow estimates for each of these areas. However, there would be significant uncertainty associated with them, as the model was developed without the benefit of the data collection effort that has been ongoing for the last three years. With the existing data and proposed data collection and analysis, refinement to that groundwater model, or a new groundwater flow model focused on the Middle Amargosa River Basin, will be an essential management tool and will likely provide additional insight into the dynamics of regional flow in the area.



2.4.4 Groundwater Basin Outflow Components

2.4.4.1 Spring Flow & Evapotranspiration

Spring flow and evapotranspiration have been combined as a basin outflow component in this basin as in this area as they are unavoidably linked. In the Supplement to the EIS, evapotranspiration along the Amargosa River is provided based on that estimated in Nevada only (Page 2-9). Groundwater-dependent vegetation (phreatophytes) are present along the Amargosa River and in spring areas. Springs discharge water from the groundwater system, but in nearly all cases within the basin, that flow either evaporates, is used by plants, or percolates back to the groundwater system within a relatively short distance. One of the few exceptions to this is Willow Creek south of Tecopa which rises from spring flow within China Ranch, and generally maintains surface flow to its confluence with the Amargosa River. In the Nevada portion of the basin, the discharge from spring flow and evapotranspiration has been estimated at 23,500 AFY (Walker & Eakin, 1963).

In the Shoshone - Tecopa - Chicago Valley - California Valley area, the combined spring flow and evapotranspiration has been estimated at approximately 8,900 AFY. In the Death Valley Basin, combined spring flow and evapotranspiration has been estimated at approximately 35,000 AFY (San Juan, Belcher, et.al, 2004).

Based on the field reconnaissance activities, it is clear that the springs in the California portion of the basin emanate from a variety of sources. These sources appear to range from those with deep circulation paths (such as Tecopa Hot Springs), and those with shallow and potentially more local circulation paths (such as at Willow Creek).

2.4.4.2 Pumpage

Within the Amargosa River Basin, pumpage is primarily within the Northern Amargosa River Basin. This water is largely used for irrigation. Table 2-2 summarizes groundwater pumping from the Northern Amargosa River Basin since 1983 (NDWR, 2012a). This represents the most up to date pumping data available from the Nevada Division of Water Resources at the time of this report. Total pumping over time is also represented on Figure 2-8. Average annual pumping since 1983 has been 12,153 AFY. In 2012, a total of 17,622 AFY was pumped from the basin. As can be seen, over the 27 years of pumping records, the Northern Amargosa River Basin has seen a steady increase in pumping. For comparison purposes, the annual duty for the Northern Amargosa River Basin is 27,336.86 AFY (includes certificate, permit, and ready for action) as of February 21, 2012 compared to the estimated annual perennial yield of the basin of 24,000 AFY (Walker and Eakin, 1963). This updated annual duty is a reduction of approximately 1,700 AFY since first reported in the 2011 State of the Basin (Source Group, 2011).

Of note is that the Supplement to the EIS, states that the Yucca Mountain SEIS pumping rates in the Amargosa Desert differ from those estimated by the USGS in developing the Death Valley Regional Flow System Model (2010 version). The SEIS used Nevada Division of Water Resources pumping data in



that it was believed that the greater pumping estimates (greater by 20 to 30 percent) were too high and would be problematic for evaluating pre-development conditions (Page 2-28, Lines 26 through 30). It should be noted that NDWR pumping estimates do not include non-permitted domestic pumping and well tend to underestimate pumping. First, the Supplement to the EIS continues to use 2003 pumping in the Amargosa Desert as typical of anticipated long-term pumping. As can be seen in Figure 2-8, *pumping at 2003 rates have been exceeded every year since 2004*. Secondly, much of the analysis presented in the Supplement to the EIS is based on modeling input which the Supplement to the EIS deems inaccurate on a key model component simply because the pumping exceeds that estimated by the Nevada Division of Water Resources in their pumpage inventory.

In the Middle Amargosa River Basin and Death Valley Basin, water supplies are more reliant on spring flow, and groundwater pumping is relatively insignificant in comparison to the Nevada portion of the basin. Groundwater pumpage for domestic or public use is probably on the order of less than 100 AFY (San Juan, Belcher, et.al. in Belcher, 2004). Water used for irrigation of date palms is supplied by spring water. It is unlikely that water use in the Shoshone-Tecopa area has changed significantly since the last State of the Basin Report (Andy Zdon & Associates, 2014). Furthermore, any additional water usage resulting from the proposed new potable water supply for Tecopa will be insignificant to the overall water budget of the area.

2.5 Future Groundwater Use and Discussion of Groundwater Availability

As shown in Table 2-2 and Figure 2-8, there has been an increased use of groundwater in the Nevada portion of the Amargosa Basin over the past 25 years. The potential for future development will be limited by both quantity and quality of water. However, as can be seen by the active duty for the Northern Amargosa River Basin, there is significant potential for pumping to increase considerably should water rights holders fully exercise their water rights. Given the over-allocated nature of the Northern Amargosa River Basin, significant impacts to the groundwater resource could result if that condition occurred. These uses are anticipated to increase due to future population growth, and the likely future addition of groundwater usage for solar energy development. Although wet cooling solar projects are not anticipated, groundwater usage for processes such as mirror washing will still be needed.

The incremental increase of solar projects within the region could result in a significant steepening of the increased trend in groundwater usage. The competing demands for renewable energy and protection of the Amargosa River point to the need for increased knowledge and baseline hydrologic data in the Middle Amargosa River Basin. Recommendations for future investigations are provided in Section 4.0 of this report.



3.0 NUMERICAL GROUNDWATER FLOW MODELING

The Supplemental Analysis relies on the Death Valley Regional Flow System Numerical Model (DVRFS Model) developed by the USGS (Belcher, et. al., 2010) for the contaminant transport modeling conducted in the analysis. This influential work has provided substantial insight into the hydrogeology of the Amargosa River Basin. However, for the purposes of the review, and in order to respond to questions posed by the County of Inyo regarding potential impacts to groundwater resulting from the proposed project, that model has limitations resulting from the extent of the model domain, boundary conditions, and intent of use for the numerical model. Although a number of modeling efforts have been conducted that cover the Nevada Test Site area and beyond, the DVRFS Model is the model generally relied upon in the Supplement to the EIS to evaluate both the flow regime and as a basis for particle transport predictions.

The Analysis of Postclosure Groundwater Impacts (DOE, 2014) is based on the version of the a modified version of the DVRFS model which has the limitations for use in this analysis as described above and the following sections. Further, the modeling failed to consider realistic future pumping scenarios in the region (e.g. potential Southern Nevada Water Authority (SNWA) pumping in basins with hydraulic connectivity to the project area based on actual, existing applications and permits), and in the Amargosa Desert specifically where pumping has already exceed those used in the SEIS and the Supplement to the EIS. It should be noted that simply applying new pumping rates into the DVRFS model, or modeling derived from it, would continue to be problematic as based on the new information that has been developed since 2010, further model refinement (to account for conceptual changes and for evaluation of model construction for use in transport analyses specifically) and recalibration would be needed prior to use for predictive simulations for impact analysis.

One key limitation results from the extent of the model grid and associated boundary conditions. The DVRFS Model has a northern extent that roughly coincides with that of the Nevada Test Site. Of note, the geochemical work in the region (e.g. Rose and Davisson, 1999) suggest a greater influence of basins to the north of the DVRFS Model grid than modeled. Railroad and Pahrangat Valleys in-turn receive groundwater underflow from basins further hydrologically upgradient to the north. In order to accommodate these underflows from Railroad and Pahrangat Valleys into the DVRFS Model, specified-head boundaries are included in portions of the northern and northeastern model boundaries. While this arrangement provided a reasonable approach for the original purposes of the model, it is problematic when considering potential impacts within the flow system from pumping stresses further to the north. Reductions in underflow cannot be represented simply by reducing the flow (e.g. if a specified flux boundary had been used), and changing head boundaries may lead to other problems associated with predictive capability in that hydraulic parameters were calibrated based on those head boundaries being set at their existing heads and conductances.



Other limitations arise from a series of uncertainties regarding the model (both the conceptual and numerical models) that were described previously (King and Bredehoeft, 1998). These limitations included:

- Uncertainty associated with evapotranspiration values;
- Uncertainties associated with sources of spring waters;
- Lack of sufficient groundwater level data;
- Lack of sufficient hydraulic parameter data; and,
- Uncertainties associated with boundary conditions.

Although a substantial amount of work was conducted to reduce those uncertainties, technical efforts focused on that part of the basin in Nevada and the flow path toward Death Valley, and uncertainties in conceptualization continue (Bushman, et.al. 2010).

Additionally, calibration of the DVRFS model did not have the benefit of data developed since 2010 that are now available within the Inyo County portion of the basin and that could be incorporated into future model calibration, nor the insight that the last five years of investigative work has provided (both in the California and Nevada portions of the model area). The Lower Amargosa River Valley (also referred to as Middle Amargosa Basin by California Department of Water Resources) in Inyo County accounts for a substantial portion of the modeled area within the DVRFS Model. It has not been until the hydrogeologic work conducted between 2010 and 2014 that significant efforts were made to reduce the uncertainties listed. That work has yet to be incorporated into the numerical modeling and so those uncertainties continue to follow in the analysis presented within the Supplement to the EIS. Changes in the numerical modeling incorporating the data collected between 2010 and 2014 could substantially alter flowpaths and relative amounts of flow into different portions of the Amargosa River Basin. This in turn could alter the results of particle tracking analyses.

When choosing a model, or conducting a numerical modeling exercise, the model will be specifically designed to answer specific questions or to provide insight into how a groundwater system works. In considering the limitations described above, it is important to recognize the original purposes of the development of the DVRFS flow model:

- To provide boundary conditions for site scale models at the Yucca Mountain and Underground Test Area Corrective Action Units on the Nevada Test Site;
- Evaluate impacts of changes in groundwater flux within the model area;
- Provide a decision-making tool with respect to groundwater for defense and economic development on the Nevada Test Site;
- Evaluate potential effects to the Nevada Test Site due to off-site groundwater development (and within the model area);



- Provide a framework for identifying an effective groundwater quality monitoring network; and,
- Facilitate the development of a cooperative, regional Death Valley groundwater management district.

As can be seen, contaminant transport analysis was not within the original concept for the development of the model. With respect to using the DVRFS Model for contaminant transport scenarios, the model report (Belcher, et.al, 2004) stated, *“The model also can be used to provide insight about contaminant transport. Flow direction and magnitude are appropriately represented using particle tracking methods as long as the particle paths are interpreted to represent regional, not local conditions.”* This is a key statement in that using the model for predicting contaminant transport to specific local receptors does not appear to be appropriate.

In 2014, the USGS released a numerical model for assessing regional-scale groundwater flow through alluvial and carbonate rock aquifer systems across Nevada as well as parts of California and Utah (Brooks et al., 2014). The study area encompassed by the model is shown on Figure 3-1. This model, herein referred to as the “Great Basin MODFLOW model,” is based upon the USGS’s MODFLOW-2005 groundwater flow simulator (Harbaugh et al., 2005). The Great Basin MODFLOW model is calibrated to steady-state conditions that existed before extensive groundwater development. This has the benefit of using the DVRFS Model as a partial basis for its development. According to the USGS, the model generally represents hydrologic conditions up through the 1960s over the majority of the study area, prior to the onsite of significant localized groundwater pumping. Current-day conditions are represented only in areas with limited groundwater resource development (although recent surface-water development and irrigation activities are included).

Key attributes of the Great Basin MODFLOW model include:

- The study area is delineated using an approximately 1.6-million node grid, representing 110,000 square miles, distributed over eight vertical layers; horizontal grid resolution corresponds to a uniform 1-mile by 1-mile grid.
- The equivalent porous medium concept is assumed to be valid, where flow-controlling features such as minor faults and fractures through consolidated rocks are comparatively small and densely distributed at the scale of the model.
- Representation of distinct hydrogeologic units (the Upper Basin-Fill Aquifer Unit, the Lower Basin-fill Aquifer Unit, the Volcanics Unit, the Thrusted Lower Carbonate Aquifer Unit, the Thrusted Non-Carbonate Confining Unit, the Upper Carbonate Aquifer Unit, the Upper Siliciclastic Confining Unit, the Lower Carbonate Aquifer Unit, and the Non-Carbonate Confining Unit) is achieved using the Hydrogeologic Unit Flow (HUF2) package for MODFLOW.



- A confined groundwater flow condition is assumed for all layers, implemented to assure numerical stability of the model.
- Only steady-state flow conditions represented.
- Model hydraulic properties are calibrated to groundwater elevation and spring data.

Additional MODFLOW packages employed in the model include the general head boundary (GHB) package for streams and rivers, the Drain package for springs and evapotranspiration, and the Well package for representing subsurface inflows and outflow at model boundaries.

According to the USGS, examples of potential applications of the Great Basin MODFLOW model include assessing the effects of different recharge regimes, the impacts of major faults or fault zones on groundwater flow, or different conceptual models of the spatial variation of hydraulic properties. The model is also deemed suitable for use in examining the ultimate effects of groundwater withdrawals on a regional scale, to provide boundary conditions for local-scale models, and to guide data collection. In the context of regional-scale groundwater withdrawals, the suitability of the model for assessing possible hydraulic responses of the aquifer system at Yucca Mountain and vicinity (e.g., the Armargosa Valley) to future groundwater pumping regimes in central and southern Nevada was assessed by AZI. This assessment entailed simulating the regional drawdowns associated with groundwater pumping at various locations included in the Southern Nevada Water Authority's (SNWA) applications and permits for extraction. Although the Great Basin MODFLOW model does not include the impacts of recent groundwater development, the confined character of the flow model implies that insights into the distal impacts of additional pumping can be quantified using groundwater head drawdowns as the primary metric.

3.1 Aquifer Properties

The regional distribution of hydrogeologic units and other features (e.g., faults) across the model domain is geometrically complex and is presented in detail by Brooks et al. (2014). The hydrogeologic units are delineated into localized zones characterized by representative hydraulic conductivities (Brooks et al., 2014: Tables A4-1 through A4-3). Un-weighted geometric mean values for the nine hydrogeologic units are summarized in Table 3-1; the spatial distributions (and unit thicknesses) of the most permeable materials, relative to the SNWA permit locations, are shown on Figures 3-2 through 3-8. In general, with the exception of relatively isolated portions of the alluvial materials, hydraulic conductivities are low, typically characterized by values on the order of 0.1 ft/day or less. For example, the geometric mean of the carbonate aquifer zones (unweighted; not accounting for spatial extent) is 0.12 to 0.14 ft/day. These low values are important for understanding the large simulated drawdowns associated with pumping, as described below.

3.2 Pumping Scenarios and Assumptions

The SNWA's extraction application and permits pertain to locations throughout central and southern Nevada, including Cave Valley (2 applications/permits), Delamar Valley (2



applications/permits), Dry Lake Valley (2 applications/permits), Railroad Valley (18 applications/permits), Spring Valley (77 applications/permits), Three Lakes Valley (9 applications/permits), and Tikapoo Valley (3 applications/permits). The total extraction rate implied by these applications and permits for these locations is approximately 310,000 acre·ft/year. This potential pumping was added to the Great Basin MODFLOW model using the MODFLOW Well package, as implemented through the U.S. Geological Survey's ModelMuse pre- and post-processor for MODFLOW (Winston, 2009).

Four separate extraction scenarios were addressed in the current assessment:

1. Extraction from Railroad Valley locations, exclusively;
2. Extraction from Cave Valley, Delamar Valley, Dry Lake Valley, and Spring Valley;
3. Extraction from Cave Valley, Delamar Valley, Dry Lake Valley, Spring Valley, Three Lakes Valley, and Tikapoo Valley;
4. Extraction from Cave Valley, Delamar Valley, Dry Lake Valley, Railroad Valley, Spring Valley, Three Lakes Valley, and Tikapoo Valley.

Individual extraction applications and permits include an approximate location and pumping rate, although a screened interval is generally not specified. To assign screened interval locations, the following set of rules were followed, with the underlying assumption that the vertical positions of the hydrogeologic unit contacts are accurately represented in the model structure on a local scale:

- Extraction occurs through a single well in the Upper or Lower Carbonate Aquifer if at least one unit is characterized by a local thickness equaling or exceeding 1,000 feet and the depth to at least one unit is less than 2,000 feet.
- Extraction occurs through a single well in the alluvium (defined as the combined thickness the Upper Basin-Fill and Lower Basin-Fill Aquifer Units) when the local unit thickness equals or exceeds 2,500 feet.
- Extraction occurs in the alluvium, by default, when both of the above conditions are true.
- If neither of the first two conditions is met, extraction is assumed to occur from a single well screened across the entire hydrostratigraphic section at the permit location, with MODFLOW's Well package used to distribute extraction rates from individual layers in proportion to the local transmissivity.

As discussed below, simulation of full permitted extraction rates under steady-state conditions results in exceedingly large predicted drawdowns. Therefore, an alternative, limited pumping case entailing Scenarios 1-4 was also simulated. In contrast to the full-pumping case, the limited pumping case does not consider extraction from locations where the carbonate and alluvial aquifers are both inconsistent with the first two assumptions listed above. In addition, extraction rates for those permits which are posited under the limited-pumping case are set to only 40 percent of the permitted value.



Finally, the steady-state assumption characterizing the Great Basin MODFLOW model limits its utility for evaluating permitted extraction rates over comparatively near-term time frames (i.e., decades). However, given the long-time frame for being analyzed in the Supplement to the EIS (e.g. one million years) this is of less consequence. Generally, questions concerning the sustainability of pumping rates across the spatial scale of the model are difficult to address. Consequently, a demonstration transient simulation based on Extraction Scenario 4 under full-pumping conditions was conducted using a single assumed specific storage value applied across the entire model domain.

3.3 Model Results

3.3.1 Limited-Pumping Scenarios

Simulated steady-state drawdowns associated with Scenarios 1-4 under the limited-pumping case are depicted on figures in Appendix E for the top layer of the Great Basin MODFLOW model. In addition to the uniform reduction of pumping to 40 percent of the permitted value, excluding consideration of permit locations that do not satisfy either screened-interval assumption for the carbonate and alluvial aquifers reduces the total pumping in the model by an additional 40 percent. The associated model results imply drawdowns ranging up to 2,000-3,000 feet. While these maximum drawdown values may be unrealistic in a practical sense (particularly since local unconfined conditions around the extraction locations are not modeled), they are comparable to the thicknesses of the basin-fill alluvium in many instances. As a result, the model results may provide some insight into the regional extent of drawdown associated with pumping from various locations over very long time periods.

Among the four scenarios, only Scenario 2 (groundwater extraction from only Cave Valley, Delamar Valley, Dry Lake Valley, and Spring Valley) results in a simulated drawdown in the first model layer of less than one foot in the vicinity of Yucca Mountain. Similar distributions of drawdown were generated for the other model layers (not depicted). In contrast, Scenarios 1, 3, and 4 yield maximum drawdowns near Yucca Mountain in the first model layer ranging up to 130 feet, 40 feet, and 180 feet, respectively. These results suggest that the modeled groundwater development in Railroad Valley would be of the highest significance in impacting hydrology in the Yucca Mountain area, compared to the other permitted locations.

Simulated impacts to the vertical movement of groundwater (using Layers 5 and 8 as surrogates for the Volcanics Unit and the Lower Carbonate Aquifer Unit, respectively) for Scenario 4 are shown on a figure in Appendix E. Specifically, the figure depicts the drawdown in model Layer 5 minus the drawdown in model layer 8, so that negative values (i.e., the unshaded contour lines on the figure) indicate where the previous upward-directed flow of groundwater would be reduced. The implied impacts to vertical water movement are complex; in some areas the net impact to upward flow is positive, while in some areas it is negative. In the vicinity of Yucca Mountain, the upward vertical head difference between the carbonates would be reduced in this particular model scenario, but only on the order of some 5 feet. Additional pumping from Railroad Valley would magnify this change,



but the augmented pumping may not be hydrologically sustainable over very long time periods (as discussed below).

Changes in vertical head differences are also sensitive to which individual permit location extract from particular hydrogeological units. For example, for limited pumping under Extraction Scenario 4, 10 of the permit locations tap the alluvium and only 3 tap the carbonate aquifer(s), according to Rules 1 and 2 as listed in Section 3. Changing the screened intervals at these extraction locations, as well as those in some for the other valleys, could also alter the magnitude of the vertical head difference.

3.3.2 Full-Pumping Scenarios

Simulated drawdowns associated under presumed full-pumping (i.e. all permit locations operating at permit-specified extraction rates) for Scenarios 1 through 4 are shown on figures in Appendix E. The substantially larger overall pumping rates in comparison to those of the limited pumping case yield correspondingly excessive modeled drawdowns, extending to tens of thousands of feet in some areas. These results encompass the majority of the saturated thickness in some locations. The large steady-state drawdowns are a reflection of (1) the non-uniform distribution of natural recharge, with the majority occurring in the northeastern portion of the model domain, well away from the modeled permitted extraction areas, and (2) low overall hydraulic conductivity when averaged across the very large spatial scales of the model (Table 3-1). The sizes of the drawdowns would appear to preclude these simulation results from informing hydrologic impact assessments in the Yucca Mountain area, either as a result of unsustainable pumping rates or an ill-defined impact time-frame.

3.3.3 Transient Scenario

Because the steady-state character of the Great Basin MODFLOW model excludes its application in forecasting groundwater head declines in response to pumping as a function of time, a modified version of the model was implemented to help constrain the time scales associated with the drawdowns associated with extraction. The modification consisted of assigning a uniform specific storage parameter of $1.4 \times 10^{-7} \text{ ft}^{-1}$, corresponding to the compressibility of water, across the entire (confined) model domain. This assumption is conservative with respect to the transient release of water from storage in response to pumping, since unconsolidated alluvial basin-fill would likely be characterized by higher specific storage values (i.e., greater than that implied by water compressibility exclusively), with unconfined conditions providing much higher values still (as specific yield), albeit limited in spatial extent.

The distribution of simulated drawdown in the first model layer after 365 years for Extraction Scenario 4 (full-pumping case) is shown in Appendix E. In comparison to the steady-state model, the time-dependent drawdowns after more than three centuries of extraction are substantially smaller (on the order of only a few hundred feet in the vicinity of the application and permit



locations). This result implies that transient effects must be taken into account when computing pumping-induced drawdowns over time-frames important for water-supply planning purposes.

3.4 Modeling Discussion

The Great Basin MODFLOW model represents a calibrated, large-scale regional groundwater flow model that could be expected to offer predictive insights into potential hydrological impacts of future groundwater development in central and southern Nevada upon the Yucca Mountain area. Potential advantages of the model include (1) calibrated distributed hydraulic conductivity values and, (2) the vast spatial extent of the model, reducing the impacts of boundary condition assumptions on the Yucca Mountain-area hydrology imparted by smaller-scale models. However, the model is characterized by certain key limitations, including its overall calibration to pre-groundwater development data and its assumption of uniform confined groundwater flow conditions. These and other limitations such as steady-state only flow) contribute to excessive modeled drawdowns when the SNWA permits for the Cave, Delamar, Dry Lakes, Railroad, Spring, Three Lakes, and Tikapoo Valleys are included.

The key issue associated with the development of very large simulated drawdowns stemming from pumping is the associated time scale. Reduced extraction scenarios indicate that moderate hydrologic effects in the Yucca Mountain area are possible when groundwater head drawdowns extend across a major portion of the alluvial thickness in valleys to the north and east. The specific impacts on vertical gradients between hydrogeologic units near Yucca Mountain and elsewhere in the model domain will be dependent upon which units are tapped for development. Moreover, given the imprecise locations of both the permit locations, the depths to contacts between the hydrogeologic units, and local-scale variability in hydraulic properties (i.e., the validity of the equivalent porous medium assumption at the small scale), the magnitude and direction vertical groundwater flow will be uncertain. This also has a substantial effect on transport estimates. As presented in numerical flow/transport modeling conducted by Bredehoeft and King (2010), the predicted travel time of a particle from Yucca Mountain to Death Valley through the Carbonate Aquifer could be as short as 100 years or as long as 2,000 years, depending on porosity (itself a parameter that will have considerable uncertainty associated with it). This suggest a more time critical component to potential impacts to water resources in Inyo County than presented in the Supplement to the EIS.

Including even conservative storage assumptions in the model demonstrates that a long period of time will be required for large drawdowns to manifest. Consequently, sustainability of pumping rates may be constrained differently in the context of water supply planning verses the million-year assessment time frame associated with existence of the waste repository at Yucca Mountain. An additional detail, which was not considered in the current assessment, is the outward rate of propagation of pumping-induced cones of depression toward the Yucca Mountain area. Such an



analysis would require a more developed and calibrated transient model, including location-specific storage parameters.

Based on the all of the information provided within Section 3.0, a reliable modeling tool that addresses the County of Inyo's concern regarding the effects of potential groundwater development within the region (particularly to the north of the DVRFS Model area (e.g. Railroad, Paharangat and connected valleys) is not currently available. Without such a reliable modeling tool, the Supplement to EIS cannot realistically analyze the potential impacts of the planned groundwater pumping by the Southern Nevada Water Authority on the upward hydrologic gradient under the proposed repository site.



4.0 SUMMARY COMMENTS TO SUPPLEMENT TO THE EIS

The review of the Supplement to the EIS and associated technical information provided herein has been largely to evaluate the responsiveness of the Supplement to the EIS to the Adoption Determination and Inyo County's previous comments. Primarily because it does not consider new information that has become available since 2010, the Supplement to the EIS is non-responsive to both the Adoption Determination and Inyo County's comments and concerns. The following summarizes these issues on an item-by-item basis with reference to the information provided herein.

On Page 1-2 of the Supplement to the EIS (Section 1.2.1, Lines 27 through 29), it states "*Since the ADR was prepared (in 2008), the NRC staff has not identified new information that would change the NRC's staff's position described in detail in the ADR.*" A review of the referenced section of the Supplement to the EIS indicates that analysis of post-2010 field work and analysis by the USGS and consultants in the Inyo County portion of the Amargosa Basin (Shoshone-Tecopa area specifically) that affects the conceptual model for Amargosa Desert – Ash Meadows area was not been reviewed by NRC staff.

As described in earlier in this review summary, that work consisted of:

- Geochemical analysis (anions, cations, and metals) along with stable and unstable (uranium and strontium) isotope, noble gas, and radiocarbon analyses on springs, wells, and the Amargosa River;
- Periodic river gaging at several locations along the Amargosa River;
- Periodic spring flow and groundwater level measurements at springs and wells throughout the Middle Amargosa River Basin;
- Installation of four shallow monitoring wells 1) north of Shoshone along the Amargosa River, 2) along Willow Creek, 3) at Twelvemile Spring, and 4) at "Married Man's Camp" between Willow Creek and California Valley. This work included sampling and analyzing waters from those wells and outfitting those wells with transducer/data logger installations and periodic groundwater level data downloading (JWI, 2012 and JWI, 2013a);
- Refined geologic mapping being conducted by the USGS;
- Geophysical surveys by the USGS at selected locations throughout the Middle Amargosa Basin area;
- An in depth synoptic canvassing of the flow in the Amargosa River by the USGS to evaluate gaining and losing character of the River (conducted in February, 2014);
- Initiation of evapotranspiration studies along the Amargosa River in the Shoshone – Tecopa area (USGS – in progress); and,



- Development of a new, steady-state numerical groundwater flow model that simulates the Amargosa River region in the context of modeling flow throughout the carbonate rock aquifer system throughout the Great Basin (completed and published in 2014).

It should also be recognized that although it appears that new work by DOE was conducted (for example the reference to the Analysis of Postclosure Impacts, DOE, 2014), that work was based on pre-2010 data collection and analysis, and not reflective of the new work conducted in the Amargosa Basin previously described above. Further that pumping in the Amargosa Desert has been substantially greater for more than 10 years than that presented as a basis for the analysis in the Supplement to the EIS, while it has also been recognized that there is a significantly greater component of groundwater movement southward to the Shoshone-Tecopa area than considered in the Supplement to the EIS, indicates that the conceptual model as presented in the Supplement to the EIS appears to have substantial uncertainties and/or inconsistencies.

Conducting an analysis with the long-term impact analysis presented will intrinsically be prone to substantial uncertainties associated with both climate and environmental (including hydrogeologic) changes that can occur over one million years. Additionally, based on the lack of updated information presented in the Supplement to the EIS, and errors presented herein, there is a high degree of additional uncertainty attached to the conclusions presented in the Supplement to the EIS.

4.1 Responsiveness to NRC Item #1

The Supplement to the EIS is non-responsive to NRC Item #1 (“*A description of the locations of potential natural discharge of contaminated groundwater for present and expected future wetter periods*”) due to the absence of consideration of new data and analysis concerning the conceptual model of the Amargosa River basin that has been conducted since 2010. The Supplement to the EIS does not consider a more significant southward flow component that has been indicated by investigations during 2010 through 2014, and associated potential natural discharge locations in the Shoshone-Tecopa area inclusive of the Amargosa WSR.

As a result, the adequacy or appropriateness of the existing compliance point in the upper Amargosa Basin becomes unclear. Further, as described in Section 2.1 of the Supplement to the EIS, the compliance point is based on a calculated dose with respect to postclosure individual protection, human ingestion and groundwater protection standards. However, with the more significant southward component of groundwater flow in the alluvial deposits, toward the Amargosa WSR (with its resident threatened and endangered, water-dependent species), the use of this compliance point may no longer be appropriate. Further, in Section 2.1, the Supplement to the EIS states, “*Groundwater flow and potential releases traveling beyond the regulatory compliance location if uninterrupted, would discharge to Death Valley.*” In light of our new understanding of the conceptual model of the basin, that statement can no longer be made definitively as a significant portion of groundwater from the Amargosa Desert – Ash Meadows area is now understood to move southward toward the Shoshone-Tecopa area and the Amargosa WSR.



One illustration of the changing conceptual model is Figure 2-3 in the Supplement. The flow paths illustrated in Figure 2-3 have now changed based on the new information developed since 2010. These new flow paths have been described previously in Section 2.0 of this Review Summary and elsewhere (Andy Zdon & Associates, 2014, Belcher, et. al., 2015). Further, there has been a lowering of the groundwater surface in the southern Amargosa Desert northwest of Death Valley Junction (in California) that is likely the effect of pumping in the Amargosa Farms area (the principal pumping center in the Amargosa Desert). This decrease in groundwater elevation is illustrated by the hydrograph of USGS shallow Monitoring Well NA9 (along the Amargosa River in Inyo County northwest of Death Valley Junction – shown in Figure 4-1). Here groundwater levels have dropped more than 20 feet in the past 25 years. Groundwater pumping in the area of the compliance point causing drawdown in the alluvial aquifer from which a southward flow component of groundwater flow toward the Shoshone-Tecopa area and the Amargosa Wild and Scenic River occurs illustrates the importance of recognizing the greater significance in that southward flow path.

4.2 Responsiveness to NRC Item #2

The Supplement to the EIS is non-responsive to NRC Item #2 (*“A description of the physical processes at the surface discharge locations that can affect accumulation, concentration, and potential remobilization of groundwater-borne contaminants”*) due to the absence of consideration of new data and analysis concerning the conceptual model of the Amargosa River basin that has been conducted since 2010. The Supplement to the EIS does not consider a more significant southward flow component that has been indicated by investigations during 2010 through 2014, and associated potential natural discharge locations in the Shoshone-Tecopa area inclusive of the Amargosa WSR. Since those potential natural discharge locations were not considered, their physical process were also not considered.

4.3 Responsiveness to NRC Item #3

The Supplement to the EIS is non-responsive to NRC Item #3 (*“Estimates of the amount of contaminants that could be deposited at or near the surface. This involves estimates of the amount of groundwater involved in discharge or near-surface evaporation, the amounts of radiological and non-radiological contaminants in that water, contaminant concentrations in the resulting deposits, and potential environmental impacts (e.g. effects on biota)”*) due to the absence of consideration of new data and analysis concerning the conceptual model of the Amargosa River basin that has been conducted since 2010.

The Supplement to the EIS does not consider a more significant southward flow component that has been indicated by investigations during 2010 through 2014, and associated potential natural discharge locations in the Shoshone-Tecopa area inclusive of the Amargosa WSR. Section 2.3 does not recognize potential discharge locations other than an incorrectly characterized Amargosa WSR.

The analysis that was used to evaluate the estimates of the amount of contaminants that could be deposited at or near the surface were based on the use of models and associated analyses developed



before the newer, refined understanding of the conceptual model had been developed resulting from hydrogeologic work conducted between 2010 and 2014. This is illustrated by the minimal particle tracks that were identified moving south from the Amargosa Desert toward Franklin Playa. Based on our new understanding of greater influence on the Shoshone-Tecopa area and the Amargosa WSR from alluvial groundwater movement from Amargosa Desert, a greater particle density moving south beyond Franklin Playa could be expected.

With respect to the effects on biota, the Supplement to the EIS is lacking in that area in that threatened and endangered species found in the Shoshone-Tecopa area downgradient from the potentially impacted alluvial aquifer are not provided. The Supplement to the EIS neither provides a listing of endangered species and their locations, nor an analysis of the potential impacts that the proposed project would have on those species. Species such as the Amargosa Vole, Least Bell's Vireo, and others are not mentioned in Section 2.3.1 (Ecology at Surface Discharge Sites). This omission is largely because that section only describes those plant and animal species that are commonly found, or are typical for the region.

Finally, in the Environmental Impacts section (Section 3.0) of the Supplement to the EIS, impacts to aquifer are based on public health exposure, but there is little discussion regarding impacts to biota other than the effects are considered to be small. The most detailed description of the biota of concern are simply listed plant and animals. There is no reference to threatened or endangered species present in the area.

4.4 Responsiveness to Inyo Item #1

The Supplement to the EIS is non-responsive to Inyo Item #1 (*"The full extent of the lower carbonate aquifer, particularly those parts that could become contaminated and how water can leave the flow system should be described"*) due to the absence of consideration of new data and analysis concerning the conceptual model of the Amargosa River basin that has been conducted since 2010. Since the Supplement to the EIS does not consider a more significant southward flow component that has been indicated by investigations during 2010 through 2014, and given the reliance on a transport-related conceptual model that is focused on more northerly areas, the influence of the lower carbonate rock aquifer, and how discharge from that to the alluvium and eventual southward migration of contaminants is not developed. Additionally, since the Supplement to the EIS fails to analyze the effects of potential pumping in connected areas to the DVRFS (e.g. Railroad Valley, Pahrangat Valley and their interconnected upgradient valleys) the full extent of carbonate aquifer system of interest is not provided.

4.5 Responsiveness to Inyo Item #2

The Supplement to the EIS is non-responsive to Inyo Item #2 (*"The potential for a decrease or elimination of the upward vertical gradient beneath Yucca Mountain due to future upgradient water-gathering activities."*) due to the absence of an analysis of the effects of pumping based on those discharge amounts (e.g. by applications by Southern Nevada Water Authority) that are under consideration by the Nevada State Engineer. Both



Railroad Valley and Pahranaagat Valley are recognized as being areas of underflow into the DVRFS. As indicated by the modeling presented in Section 3.0, it is likely that the relative contributions of groundwater to the DVRFS are underestimated due to the low modeled hydraulic conductivities. Further, both Railroad and Pahranaagat Valleys are interconnected with other valleys to the north in Nevada where SNWA has applied for substantial quantities of groundwater for export to southern Nevada. As shown in Section 3.0, it appears that existing models may not be reliable to answer these questions, and the analysis for the potential for a decrease or elimination of the upward vertical gradient beneath Yucca Mountain remains unanswered in the Supplement to the EIS.

The Supplement to the EIS references modeling of future SNWA pumping based on applications in wells to the east (without referencing what basins or even if those basins are in the regional flow system). That modeling was of 10,600 acre-feet per year of pumping by SNWA from an unnamed location, and is significantly less than the amount of pumping sought in the SNWA applications to the Nevada State Engineer. Absent from that analysis in the Supplement to EIS are the effects of pumping from valleys inclusive of, and in hydraulic connection with Railroad and Pahranaagat Valleys.

4.6 Responsiveness to Inyo Item #3

As described earlier, the Supplement to the EIS is non-responsive to Inyo Item #3 (*“Impacts to Endangered Species that utilize the springs in the region”*). The Supplement to the EIS neither provides a listing of endangered species and their locations, nor an analysis of the potential impacts that the proposed project would have on those species. Species such as the Amargosa Vole, Least Bell’s Vireo, and others are not mentioned in Section 2.3.1 (Ecology at Surface Discharge Sites). This largely because that section only describes those plant and animal species that are commonly found, or are typical for the region.

4.7 Responsiveness to Inyo Item #4

The Supplement to the EIS is non-responsive to Inyo Item #4 (*“Cleanup and remediation measures should be described”*). The Supplement to the EIS does not describe current cleanup and remedial technologies that could be deployed should a release occur. It is not clear what, if any, actions would be taken should a release occur at the site. Given the substantial uncertainties associated with conceptual model of the area with respect to particle transport, the Supplement to the EIS would substantially benefit with a detailed description of the uncertainties in the analysis, and how those uncertainties could be addressed through further investigation, or through a defined remedial action/mitigation plan presented in the document in the event of the what is noted in the Supplement to the EIS as a likely release of contaminants from the site.

4.8 Recommendations

Given all of the inherent uncertainties and unknowns presented in this review, and that many of the issues raised by the NRC staff and Inyo County have not been fully responded to, it is clear that a reevaluation and recalibration of the DVRFS Model be conducted along with a subsequent reevaluation



of potential radionuclide transport in the aquifer systems of the Amargosa Basin. In order to support this effort, an intensive monitoring program, particularly in the Inyo County portion of the basin (in both the Lower Amargosa River area of Shoshone and Tecopa, and within the Death Valley area) should be initiated as soon as possible in order to begin developing a long-term record of groundwater level, flow and quality. Further, it is recommended that further work on the existing more regional model, or development of a new modeling tool, be used to reliably predict potential effects of the realistic potential Southern Nevada Water Authority groundwater withdrawals on the flow system beneath Yucca Mountain

Although the Supplement to the EIS relies on a series of assumed conditions to be maintained as barriers to radionuclide transport when a release occurs, the document provides scant information concerning remediation alternatives that could be used (if they exist) to address such a release and/or any other associated mitigation measures that might be contemplated. Such alternatives should be developed based on the results of the reevaluation recommended above. Given all of the uncertainties associated with the flow regime and analysis as presented in the Supplement to the EIS, a detailed remedial action plan should be developed that describes a course of action that would occur in order to remediate a release of radionuclides (within either the volcanic-alluvial or carbonate-rock aquifers) in a manner that would prevent impacts to springs and other water resources in Inyo County. It is likely that such an effort would highlight other critical data collection needs that could be addressed ahead of time, rather than waiting for a release to occur and that critical data collection effort reducing the ability to respond to a release in a timely manner.



5.0 CONDITIONS AND LIMITATIONS

This report has been prepared according to generally accepted standards of hydrogeologic practice in California at the time this report was prepared. Findings, conclusions, and recommendations contained in this report represent our professional opinion and are based, in part, on information developed by other individuals, corporations, and government agencies. The opinions presented herein are based on currently available information and developed according to the accepted standards of hydrogeologic practice in California. Other than this, no warranty is implied or intended.



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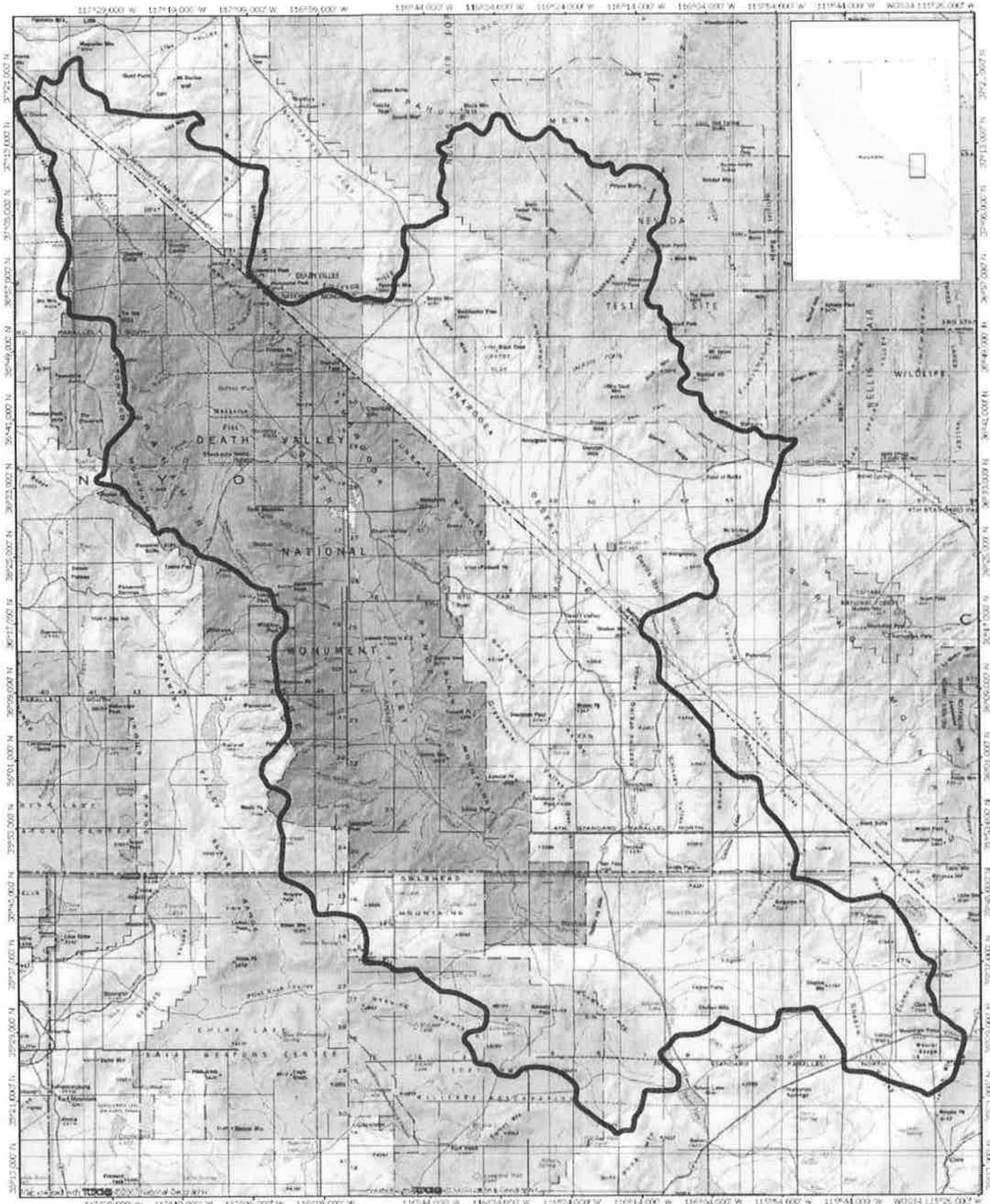
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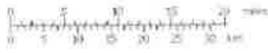
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FIGURES



NATIONAL GEOGRAPHIC



WATERSHED BOUNDARY

Figure 1-1. Location of Amargosa River Drainage Basin

ANDY ZDON & ASSOCIATES, INC.



Figure 1-2

Data Collection Locations Map

Legend

- River Location
- Well Location
- Spring Location

Scale: 1" = ~10 miles

Date: June 10, 2014

Project: TNC – Amargosa

Image Source: Google Earth

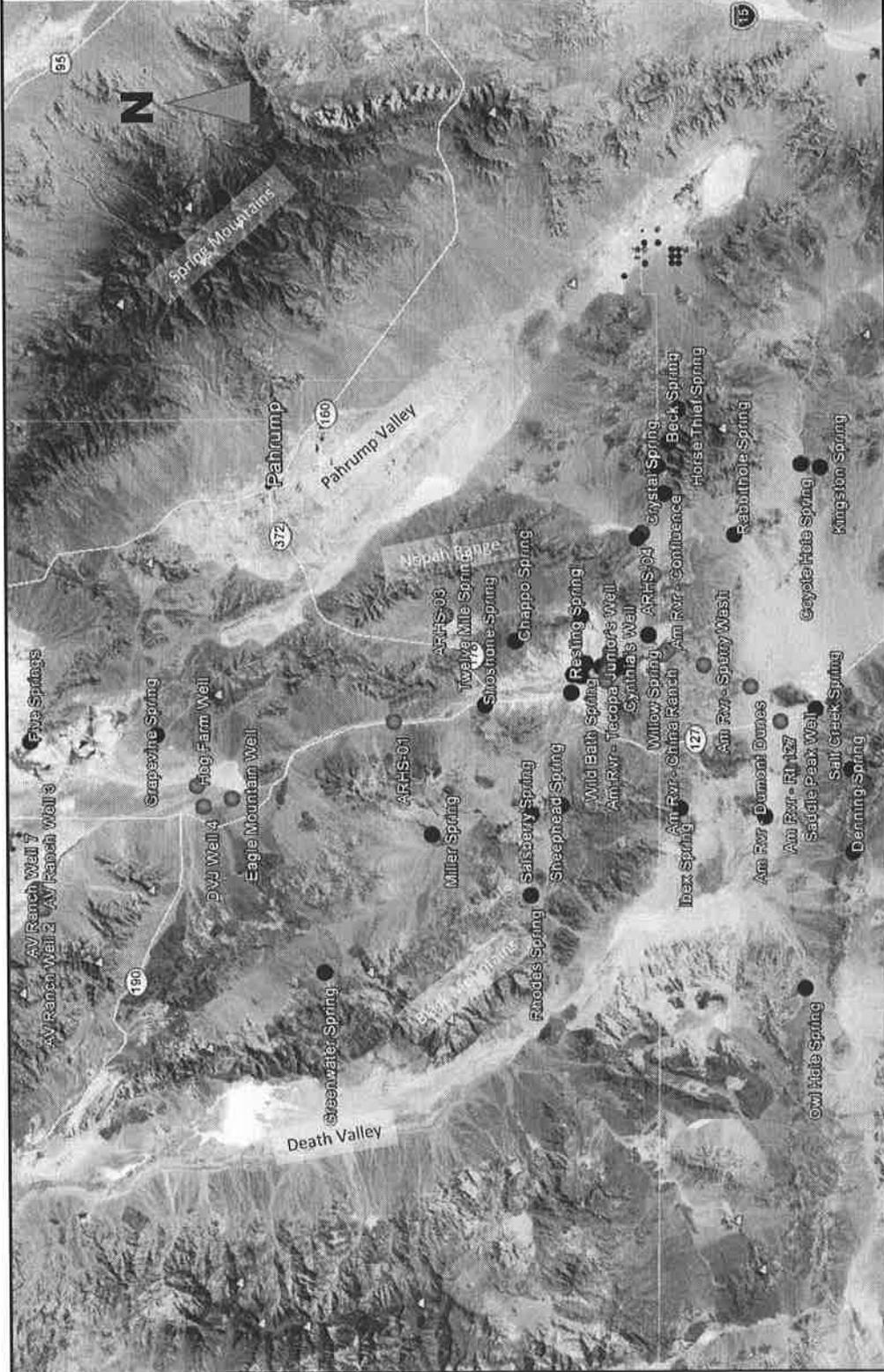


Figure 1-3

Spring Location Map

Legend

- Spring Location

Scale: 1" = ~6 miles

Date: June 3, 2014
Project: TNC – Amargosa
Image Source: Google Earth





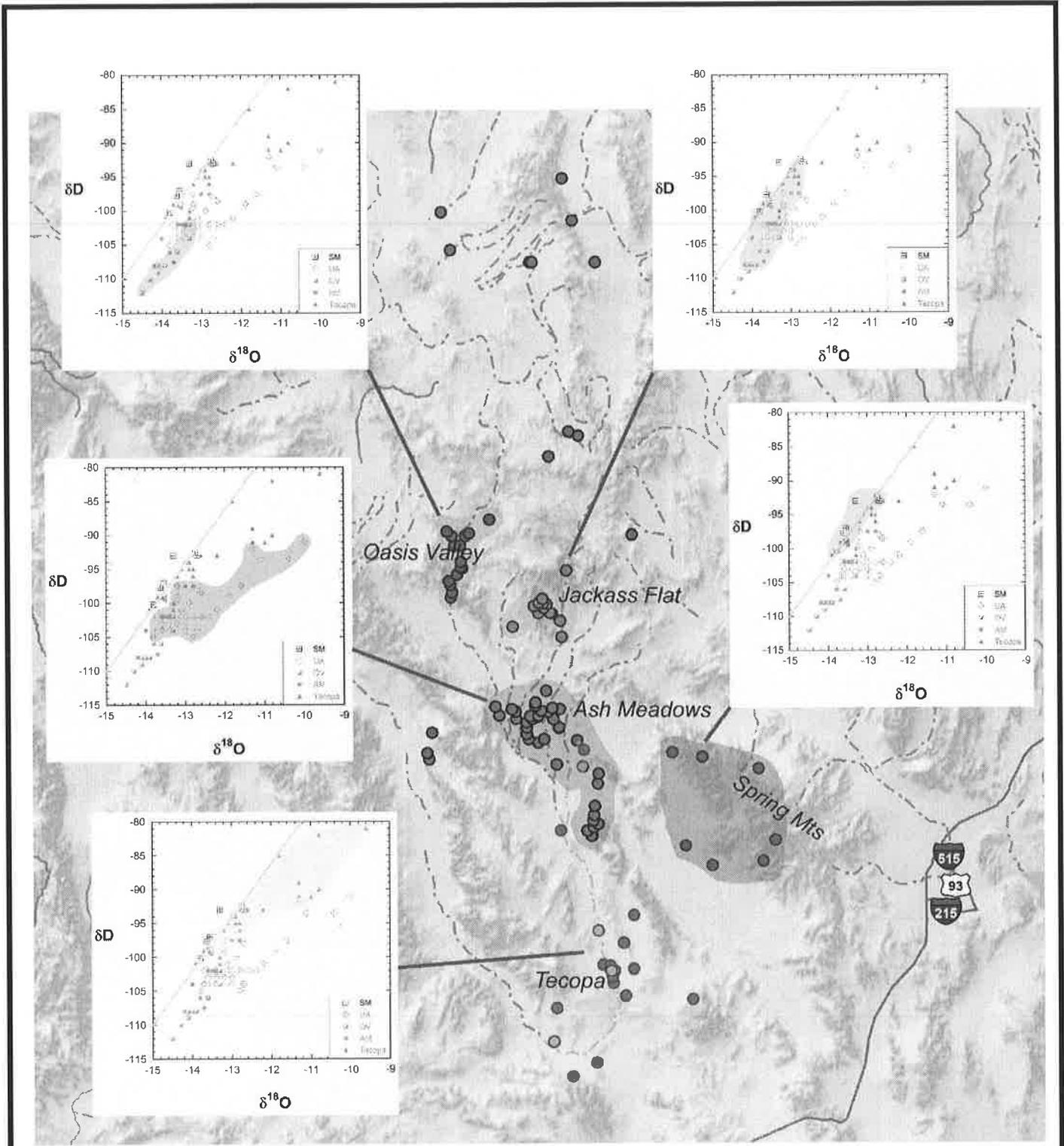
Figure 1-4
River and Well Location
Map

Legend

- River Location
- Well Location

Scale: 1" = ~6 miles

Date: June 3, 2014
 Project: TNC – Amargosa
 Image Source: Google Earth



δD-δ¹⁸O plots are compared as regional groupings in this map view. Note that the range in δD and δ¹⁸O values decreases in general from north to south and that the Tecopa region groundwater overlaps most with Spring Mts. and Ash Meadows. This suggests that either are potential sources for Tecopa groundwater, although for the latter mixing with Spring Mts. or possibly Kingston Range recharge would be required.

Figure 1-5 Regional Stable Isotope Groupings

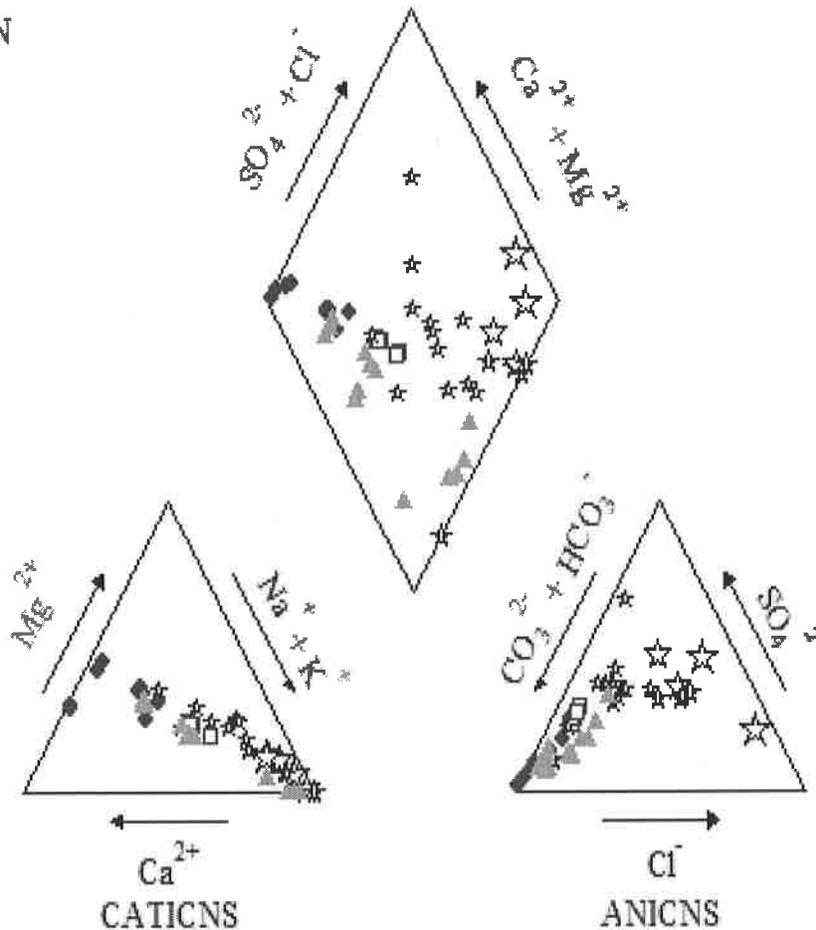
ANDY ZDON &
ASSOCIATES, INC.



Regional Carbonate, NTS, and Amargosa River Valley

EXPLANATION

- 200
- 5100



Piper plot comparing cation and anion relative concentrations in groundwater of the regional carbonate aquifer (red circles), Ash Meadows (open red squares), Nevada Test Site (green triangles), and Amargosa River Valley (open blue stars). Note that between the regional carbonate aquifer and the Amargosa River Valley groundwater, water quality changes from Ca-Mg-HCO₃ type toward Na-K-HCO₃-Cl-SO₄ type accompanied by increased salinity.

Figure 1-6 Piper Plot for Amargosa Region Waters



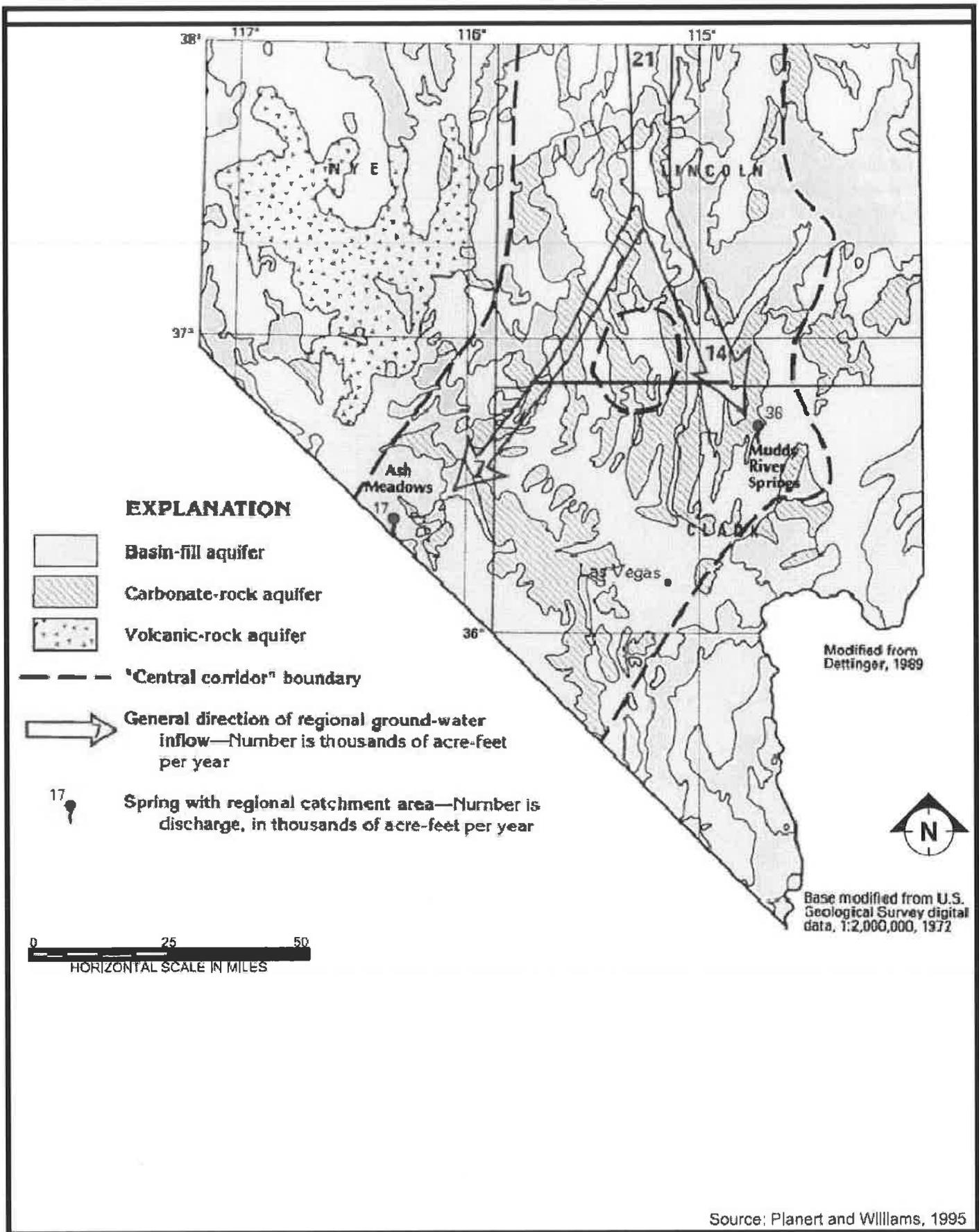
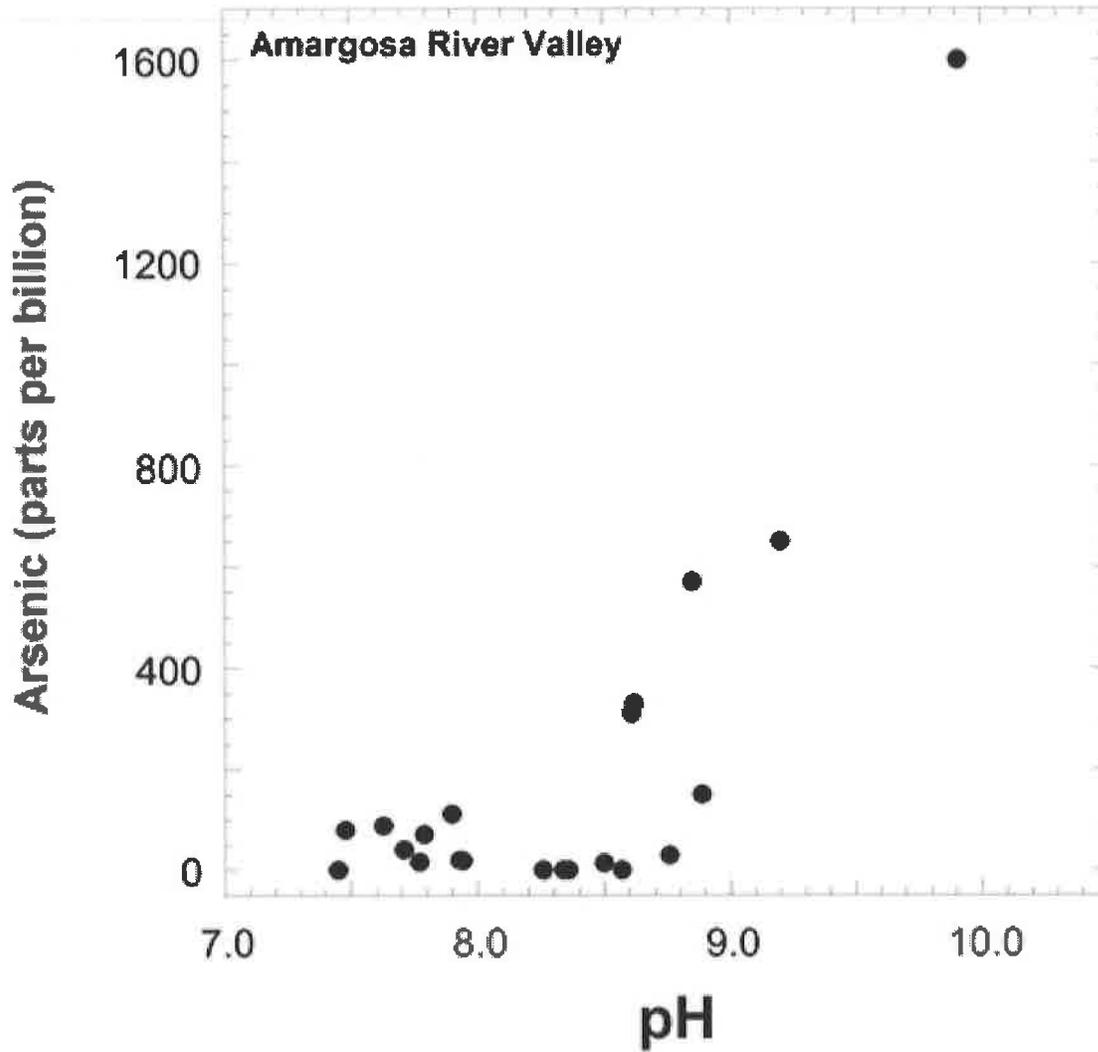


Figure 1-7. Paths for Regional Groundwater Flow
 – Nevada Portion of Basin

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 ASSOCIATES, INC.



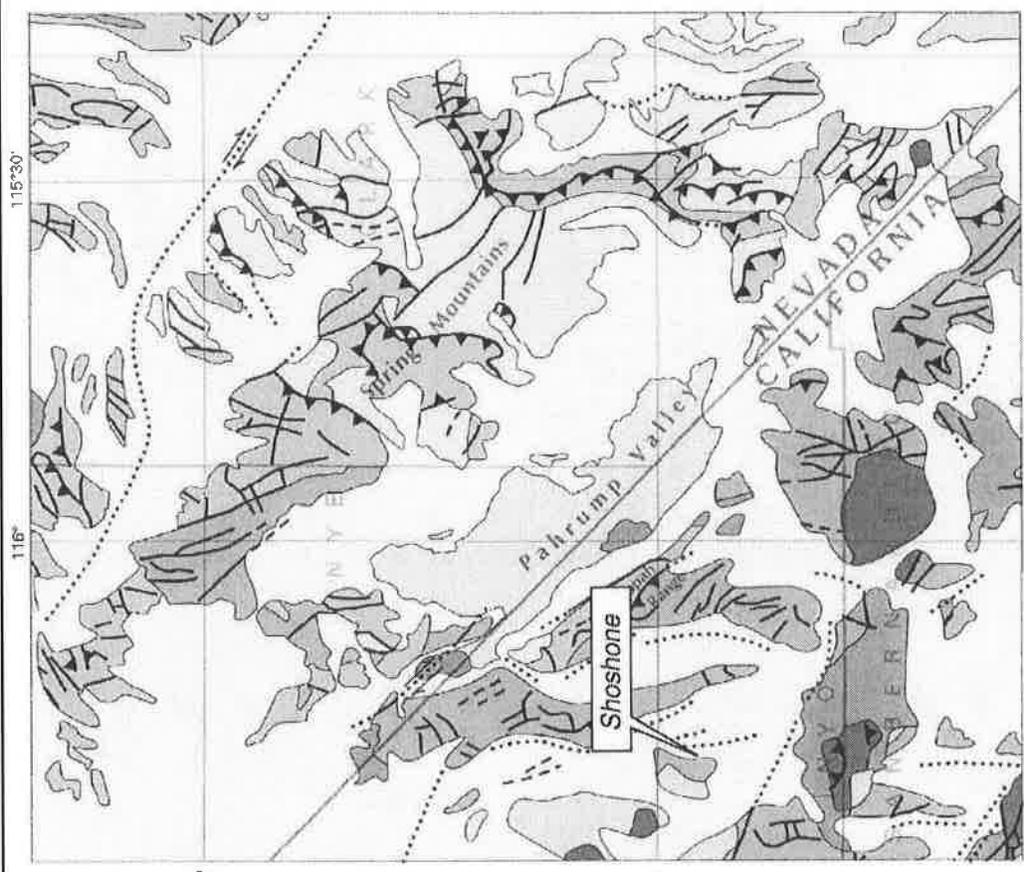


Arsenic solubility increases with increasing pH as illustrated by groundwater in the Amargosa River Valley region. The ultimate source of arsenic is not known but could be associated with the Tecopa lake beds deposits.

Figure 1-8 Arsenic and pH Relationships, Middle Amargosa Waters

ANDY ZDON & ASSOCIATES, INC.





Modified from Plume and Carlton, 1988 and Herritt, 1966

Base modified from U.S. Bureau of the Census TIGER/Line files. 1:100,000, 1990

Source: Planet and Williams, 1995

EXPLANATION

- Basin-fill deposits**
 - Quaternary playa deposits
 - Quaternary and Tertiary unconsolidated coarse-grained deposits
 - Quaternary and Tertiary lacustrine and associated fine-grained deposits
- Consolidated rocks**
 - Tertiary consolidated deposits
 - Tertiary to Triassic marine and continental rocks
 - Triassic to Mississippian carbonate rocks
 - Devonian to Cambrian carbonate and clastic rocks
 - Cambrian and Precambrian clastic rocks
 - Quaternary and Tertiary volcanic rocks
 - Miocene to Triassic intrusive rocks
 - Precambrian basement rocks
- Fault**—Dashed where approximately located. Dotted where concealed. Arrows show relative movement
- Thrust fault**—Sawteeth on upper plate

Figure 2-1. Regional Geologic Map

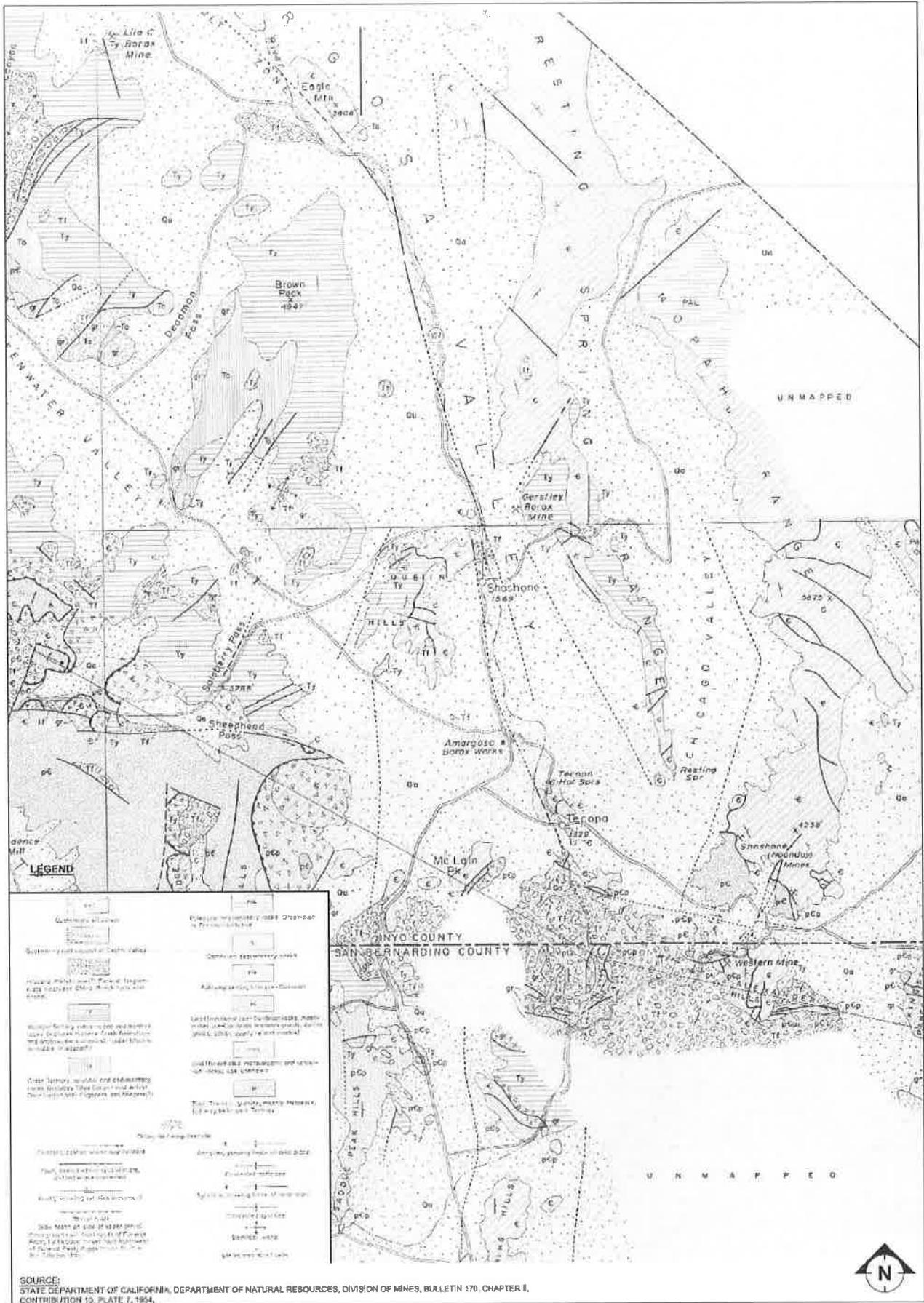
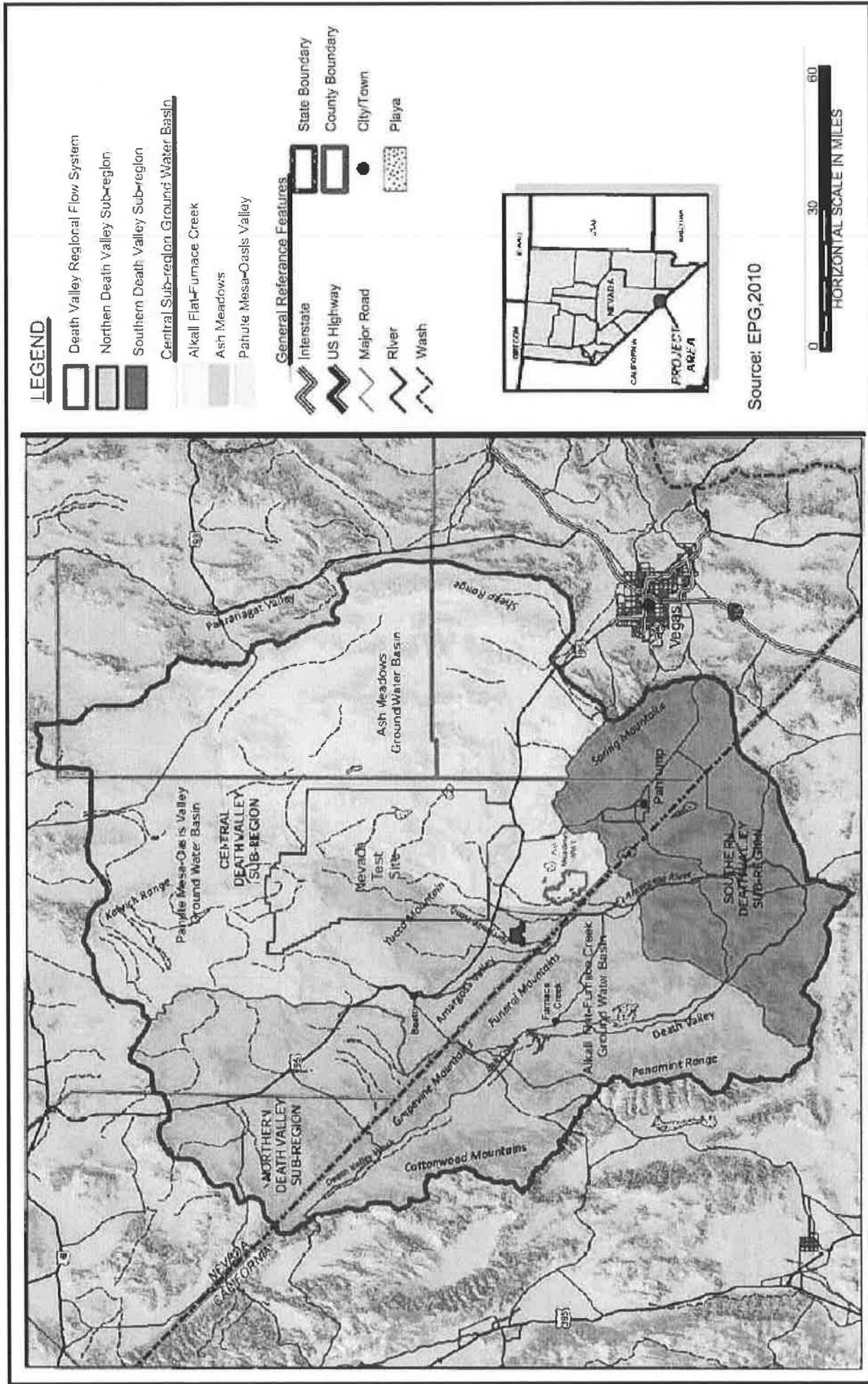


Figure 2-2. Geology of the Shoshone-Tecopa Area





LEGEND

- Death Valley Regional Flow System
 - Northern Death Valley Sub-region
 - Southern Death Valley Sub-region
 - Central Sub-region Ground Water Basin
 - Alkali Flat-Furnace Creek
 - Ash Meadows
 - Pahua Mesa-Oasis Valley
- General Reference Features**
- Interstate
 - US Highway
 - Major Road
 - River
 - Wash
 - State Boundary
 - County Boundary
 - City/Town
 - Playa

Source: EPG, 2010



Figure 2-3. Extent of the Death Valley Regional Flow System

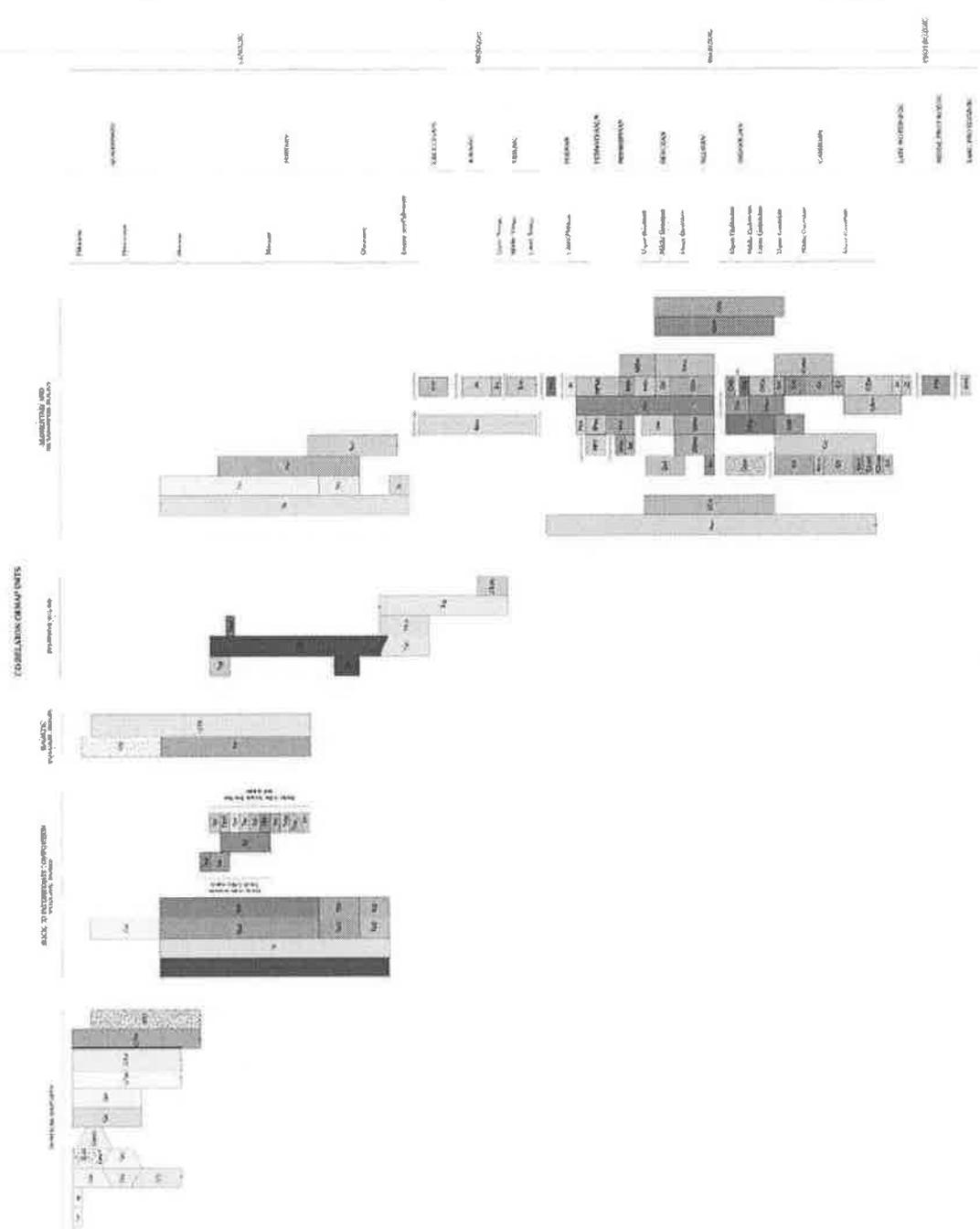
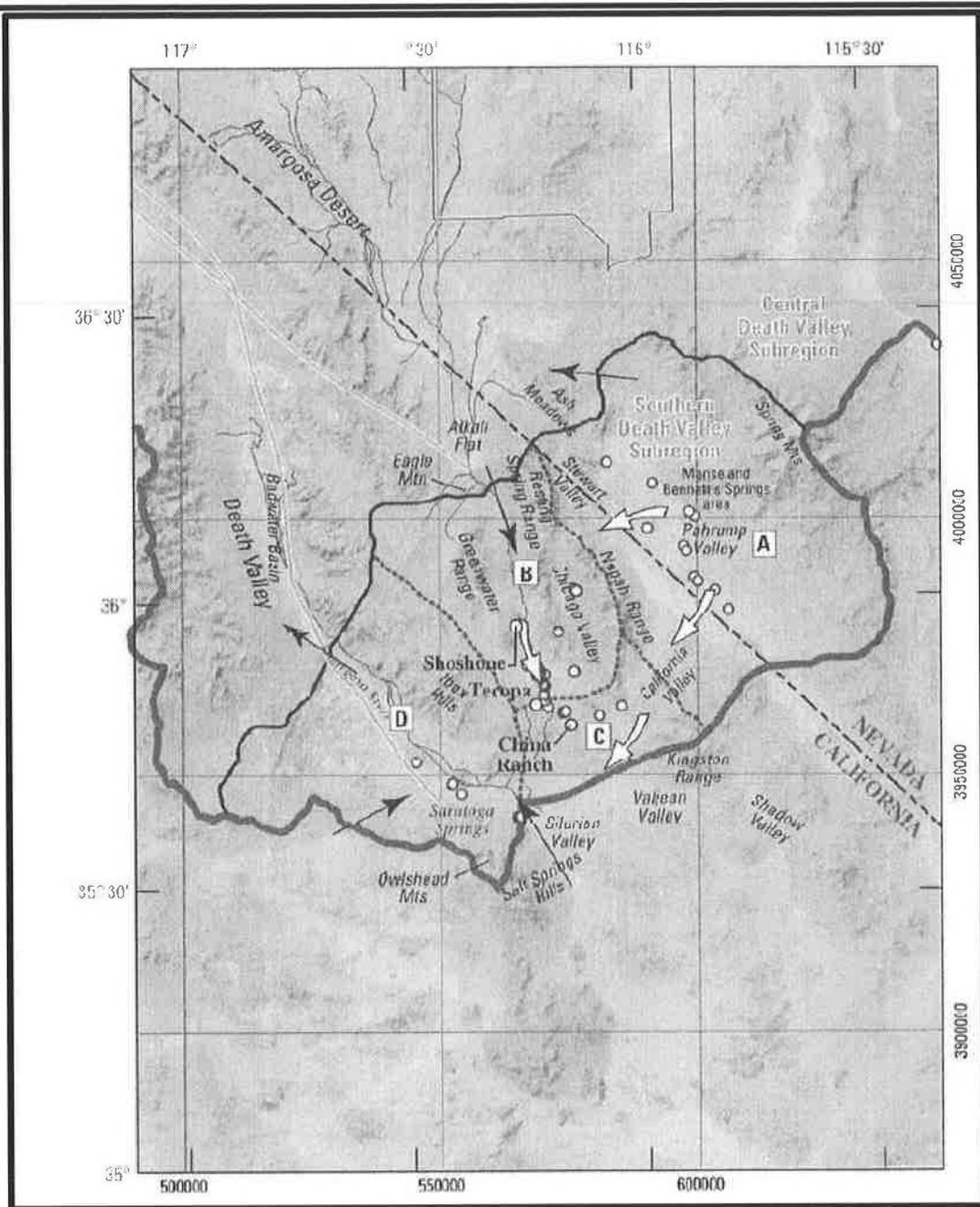


Figure 2-4A. Geology of Chicago Valley Area, Stratigraphy Section (Workman 2002)



Source: Faunt, D'Agnese, O'Brian, 2004

EXPLANATION

- Death Valley regional ground-water flow system model boundary
- Subregion boundary (Within model domain)
- Ground-water section boundary and name
- A** Pahrump Valley
- B** Shoshone-Tecopa
- C** California Valley
- D** Dix Hills

- Nevada Test Site boundary
- Potential flow into or between subregions
- General direction of ground-water flow associated with ground-water section
- Death Valley fault zone
- Regional springs
- Populated place



Figure 2-5. Paths for Regional Groundwater Flow – Middle Amargosa River and Death Valley Basins

ANDY ZDON & ASSOCIATES, INC.



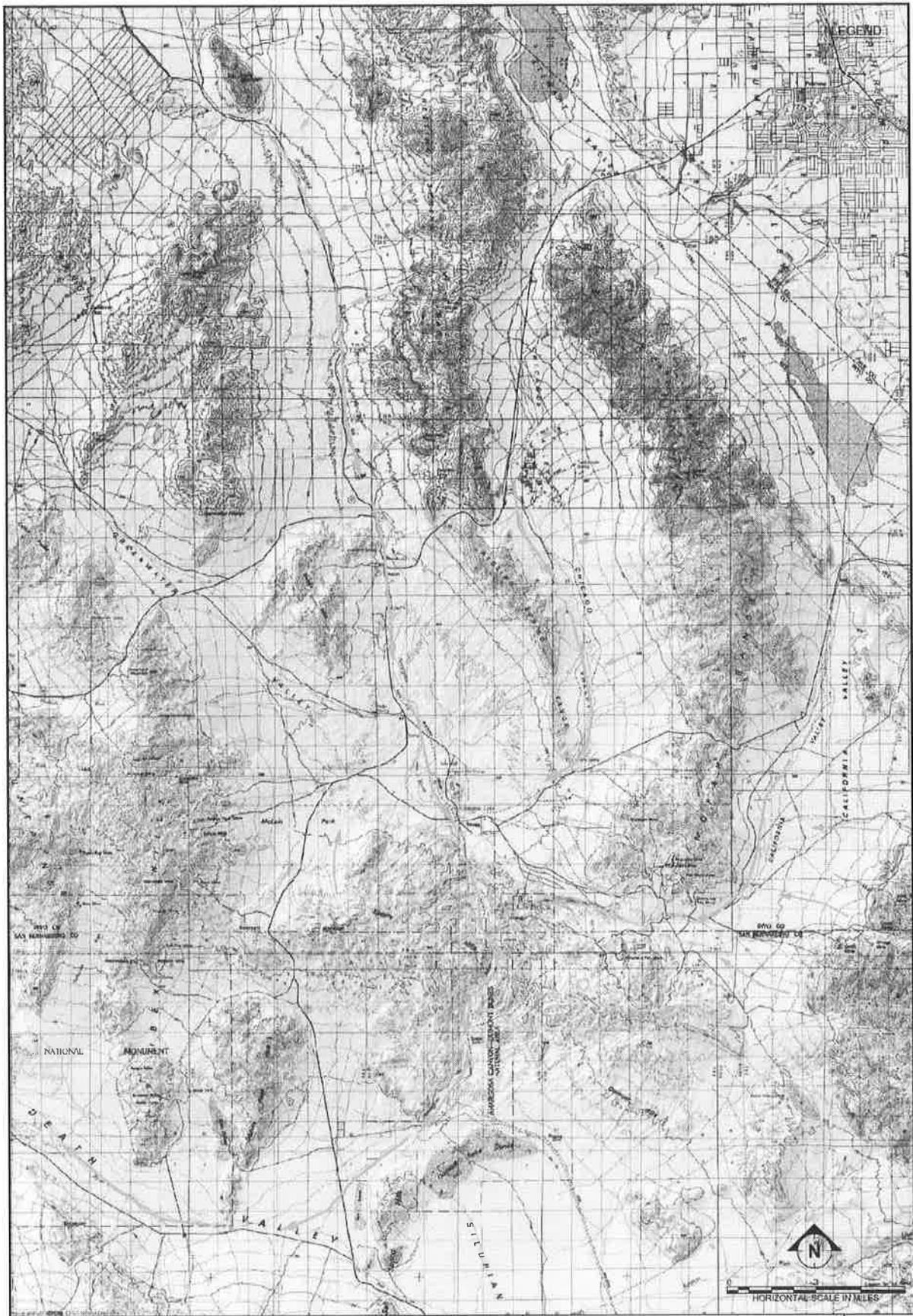


Figure 2-7. Conceptual Shallow Alluvium Flow Paths Within the Middle Amargosa River Basin



Amargosa Valley Pumping

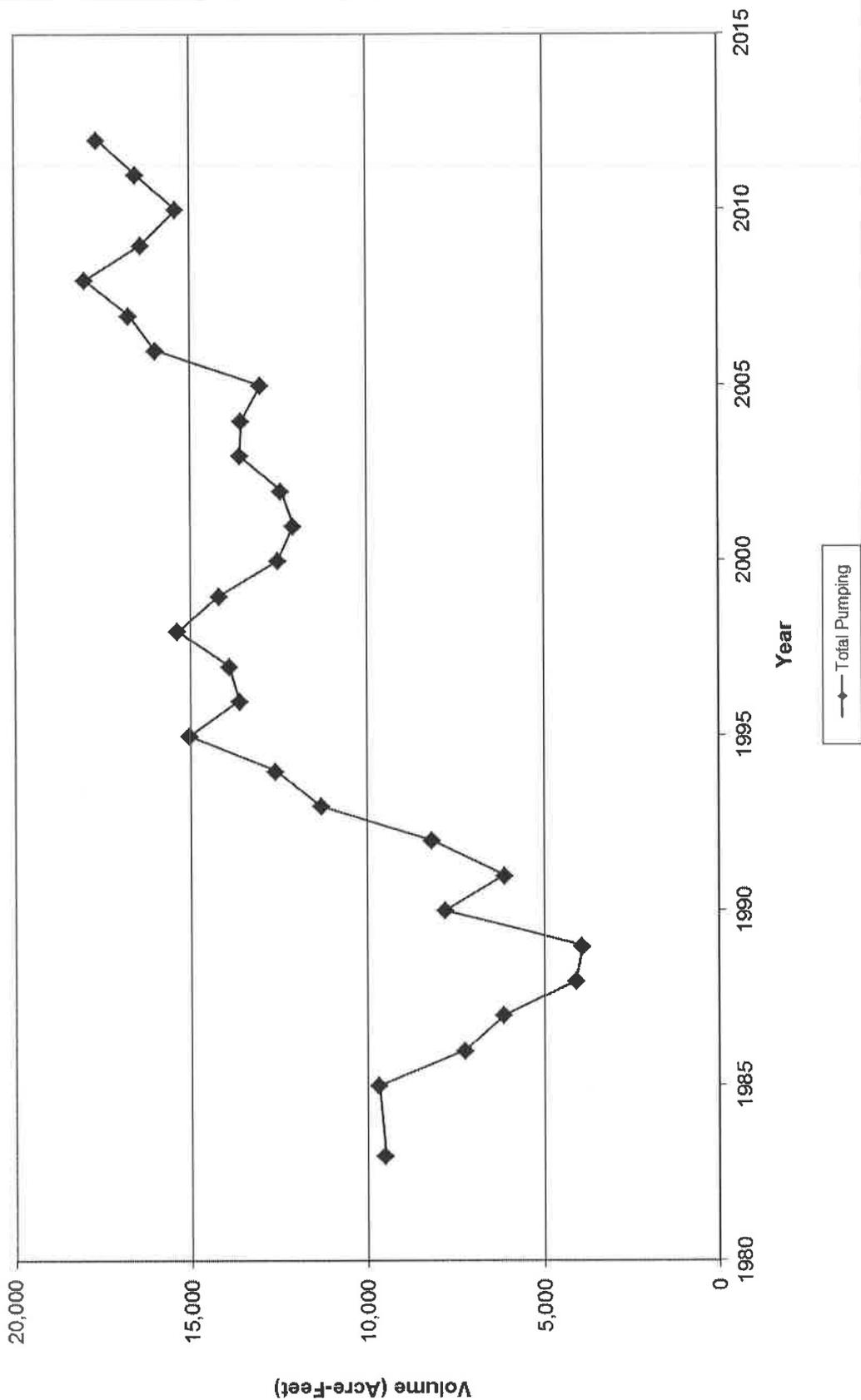


Figure 2-8. Pumping vs. Time, Amargosa Desert Area, Nevada



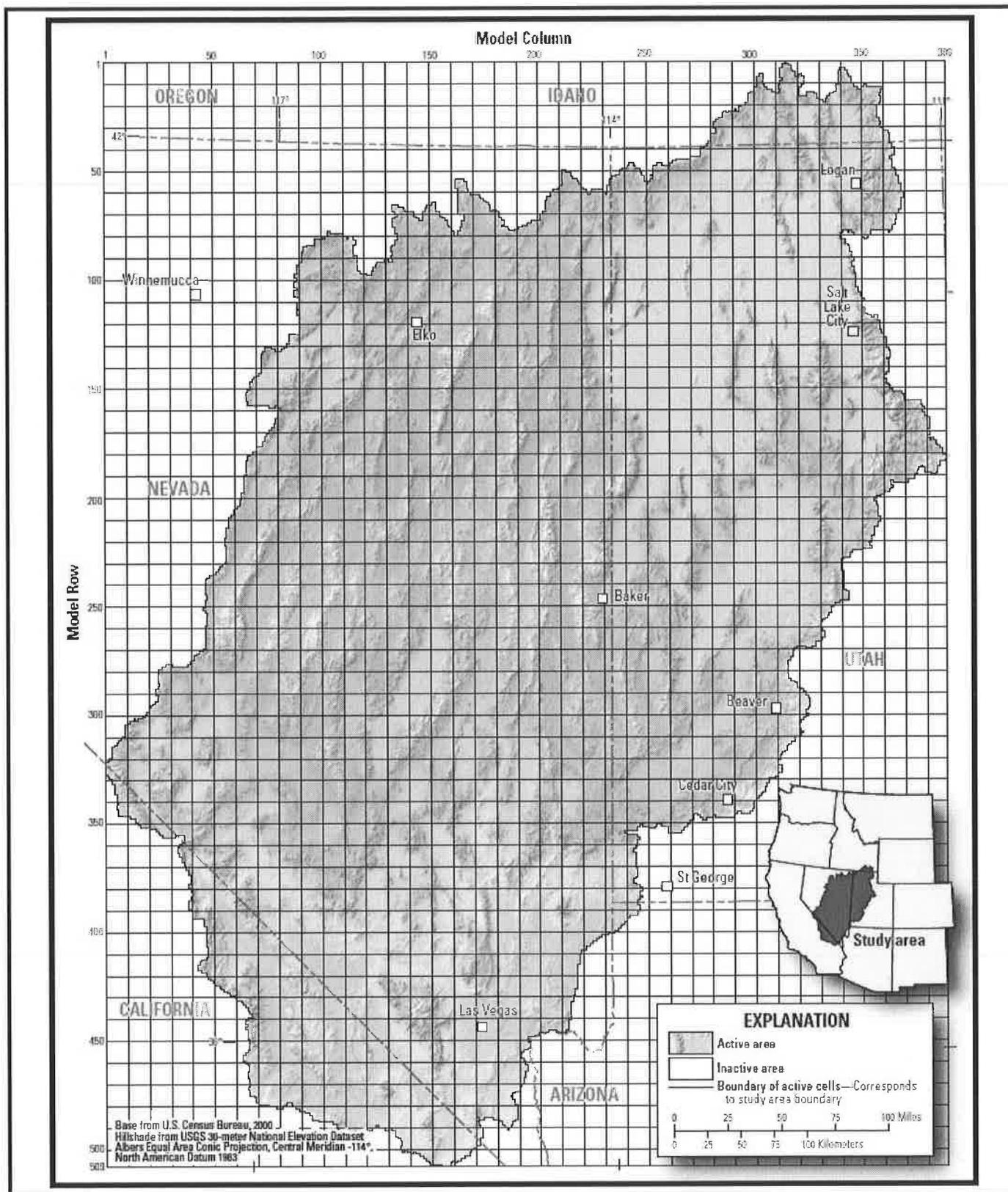


Figure 3-1. Extant of Great Basin MODFLOW Model (from Brooks, et.al., 2014)



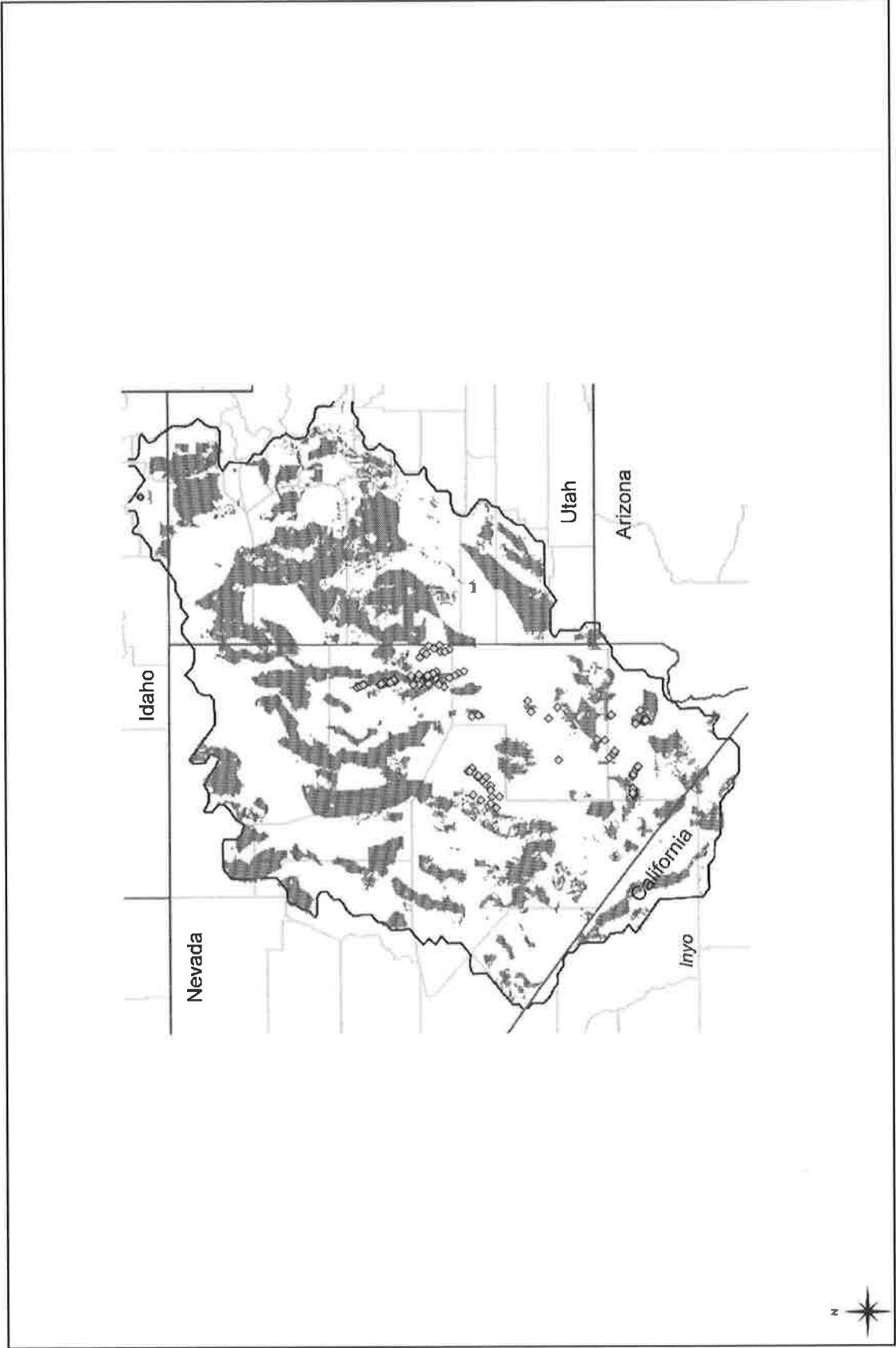


Figure 3-2. Model Domain Areas with Hydraulic Conductivity >1 ft/day (Diamonds indicate SNWA Pumping Locations)

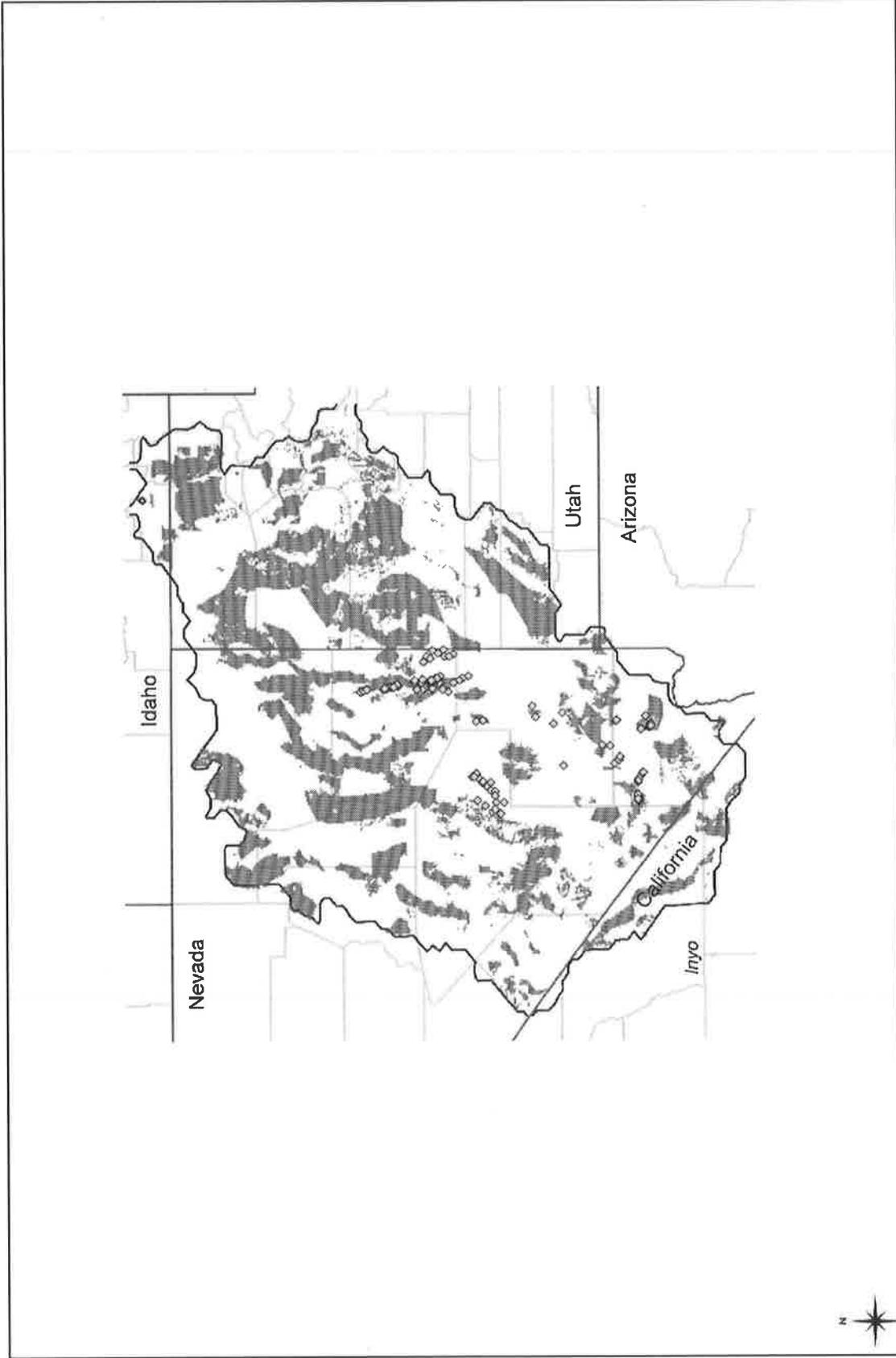


Figure 3-3. Model Domain Areas with Hydraulic Conductivity >10 ft/day (Diamonds indicate SNWA Pumping Locations)

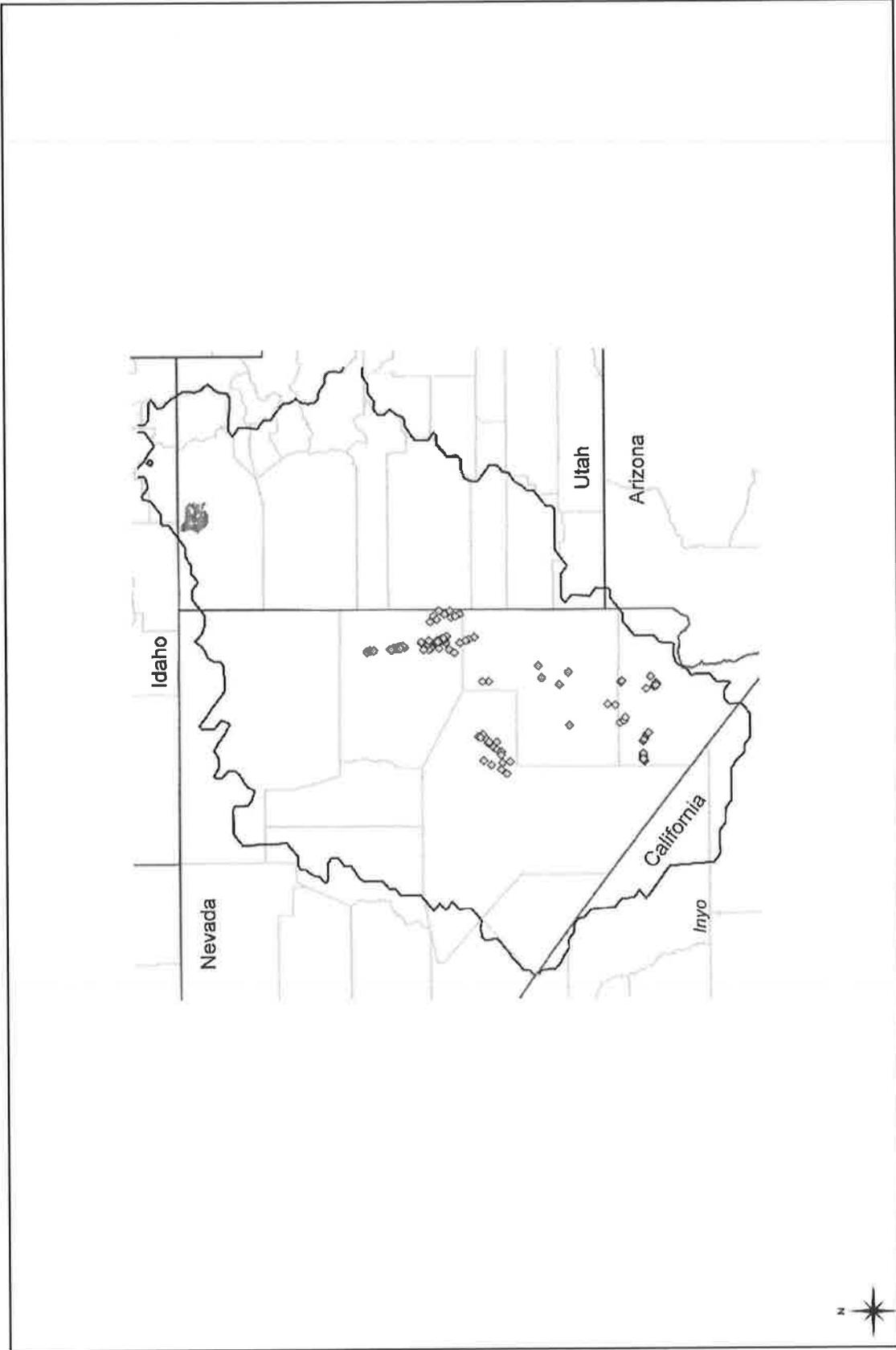


Figure 3-4. Model Domain Areas with Hydraulic Conductivity >100 ft/day (diamonds indicate SNWA pumping locations)

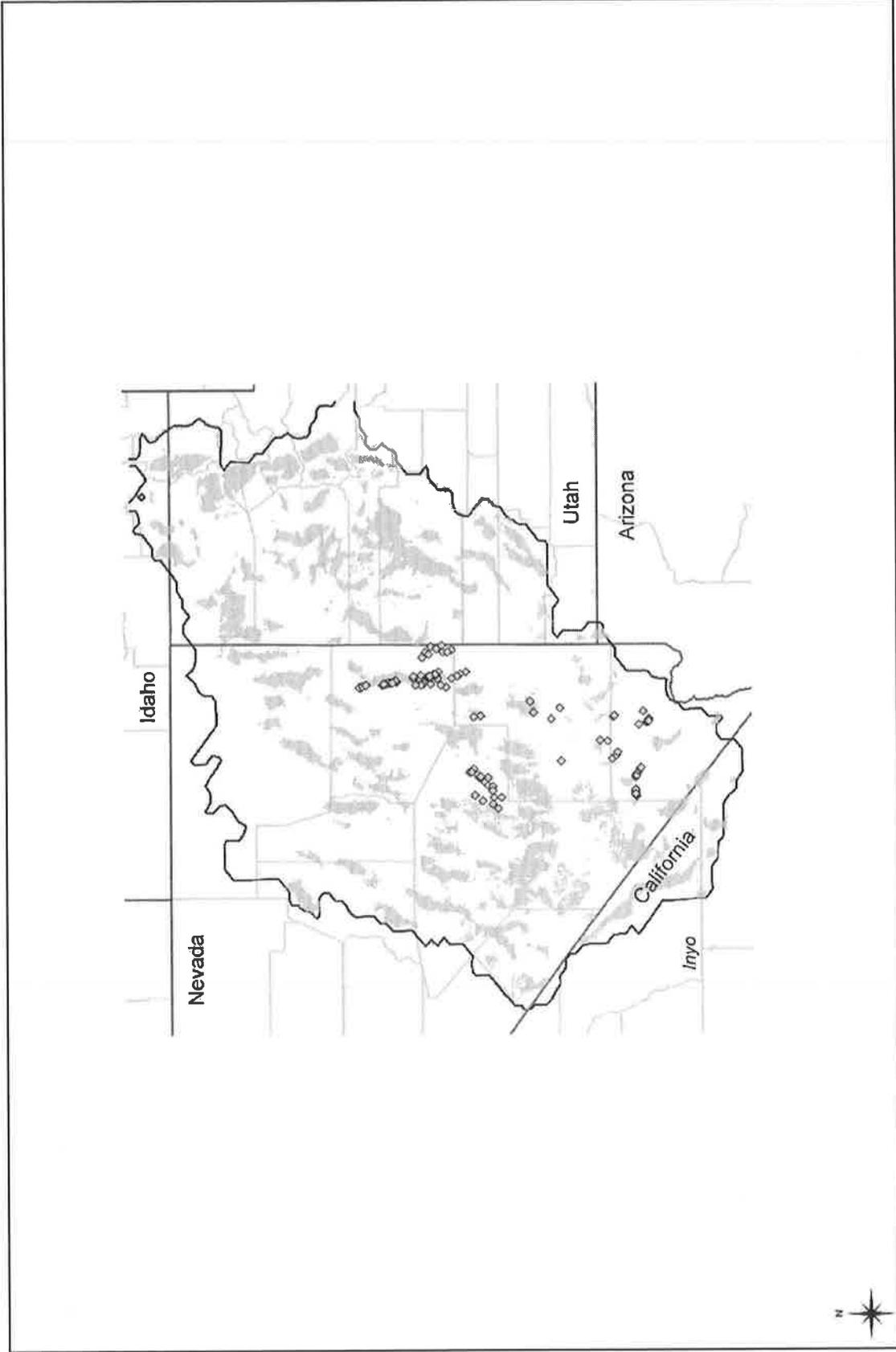


Figure 3-5. UBFAU Areas with with Hydraulic Conductivity >1 ft/day (diamonds indicate SNWA pumping locations)

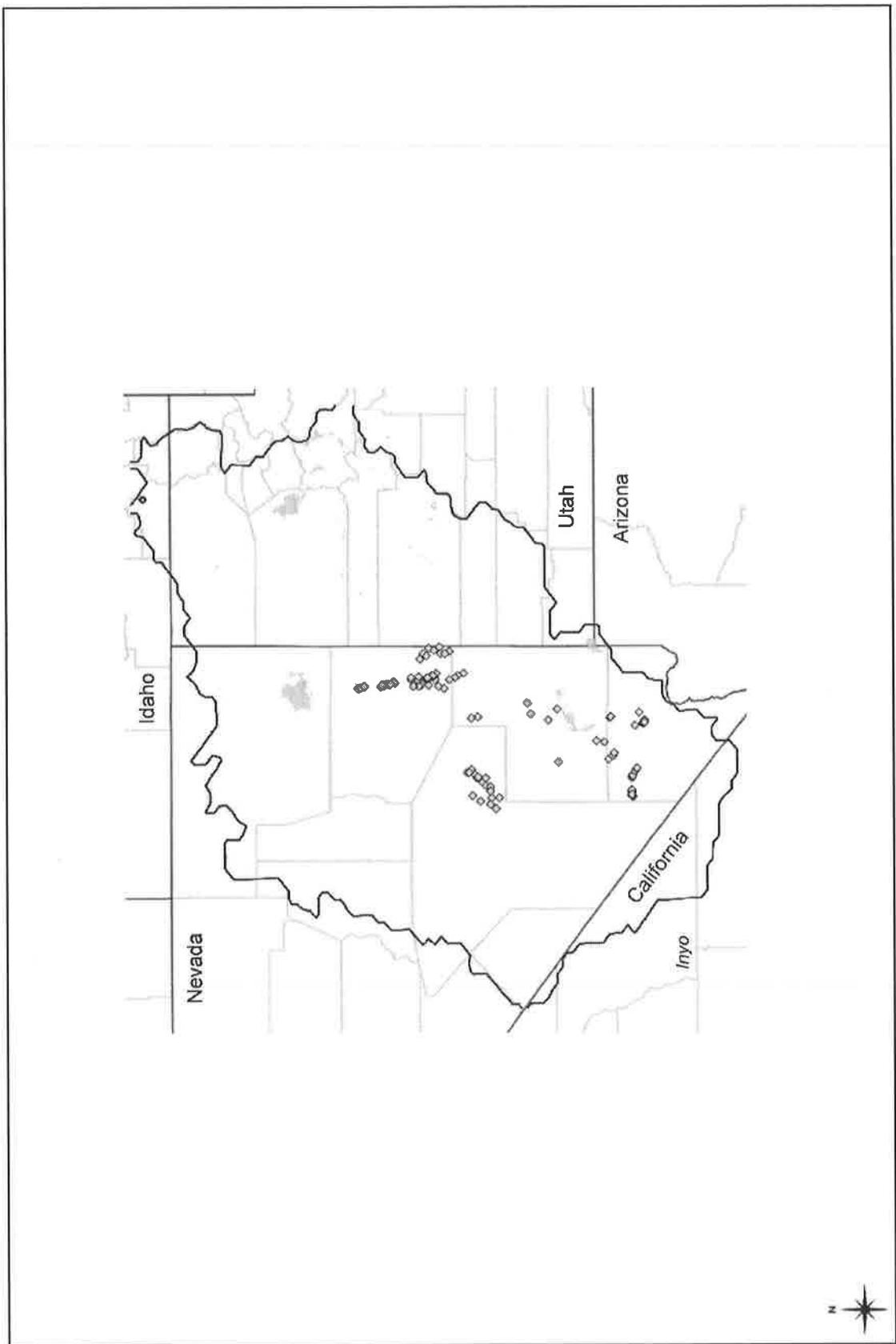


Figure 3-6. UCAU Areas with Hydraulic Conductivity > 1 ft/day (diamonds indicate SNWA pumping locations)

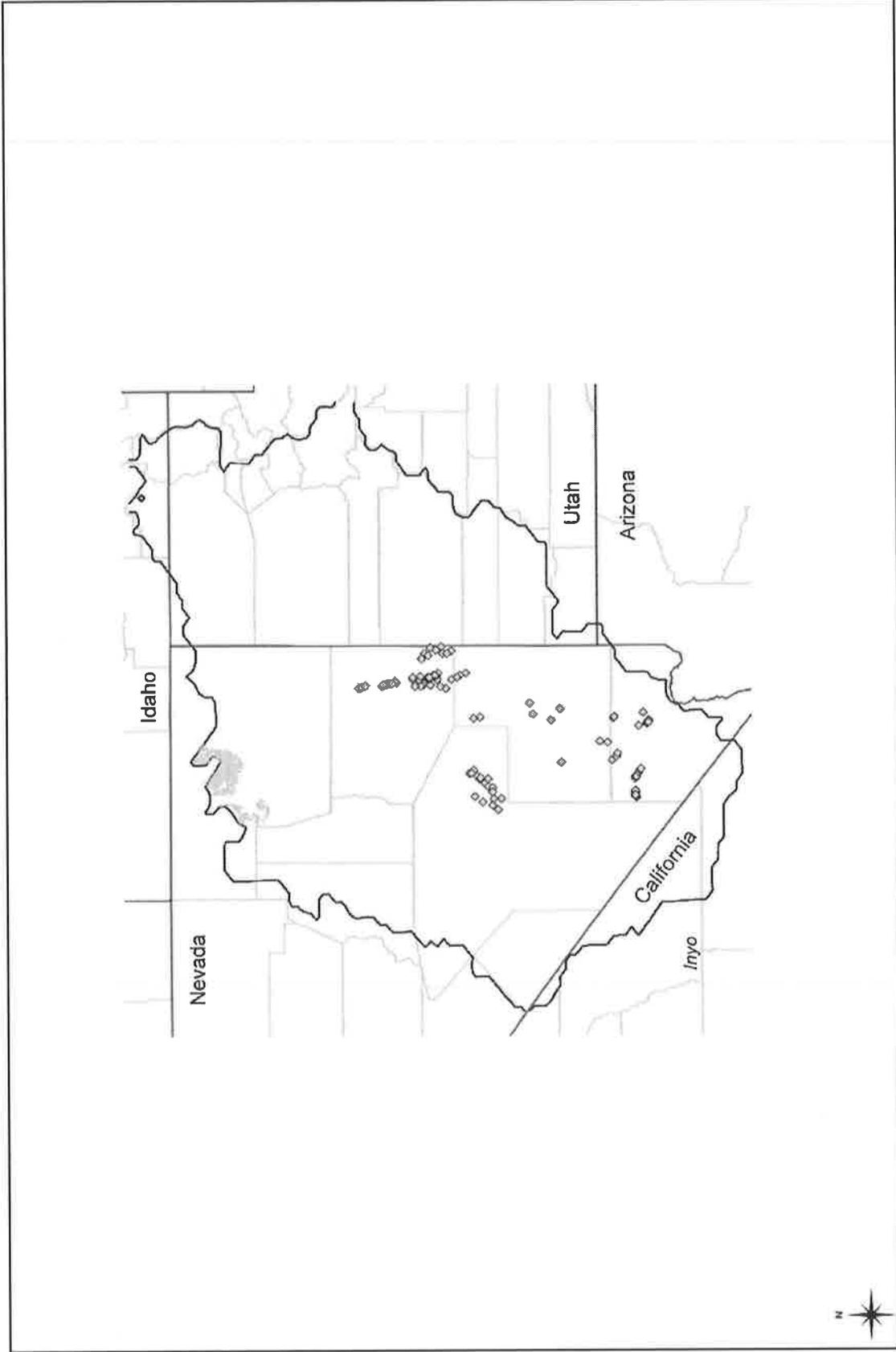


Figure 3-7. VU Areas with with Hydraulic Conductivity >1 ft/day (diamonds indicate SNWA pumping locations)

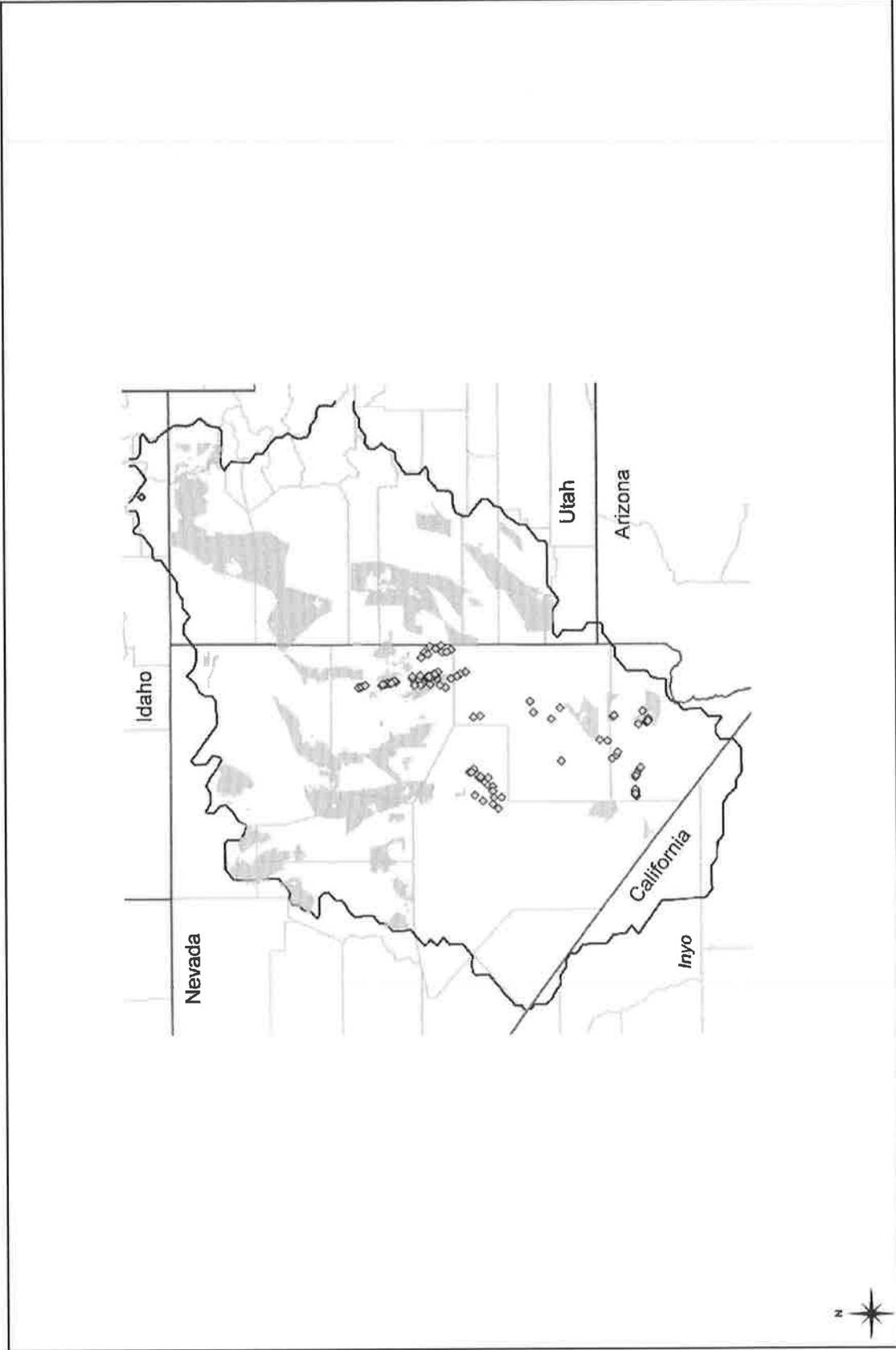


Figure 3-8. LCAU Areas with with Hydraulic Conductivity >1 ft/day (diamonds indicate SNWA pumping locations)

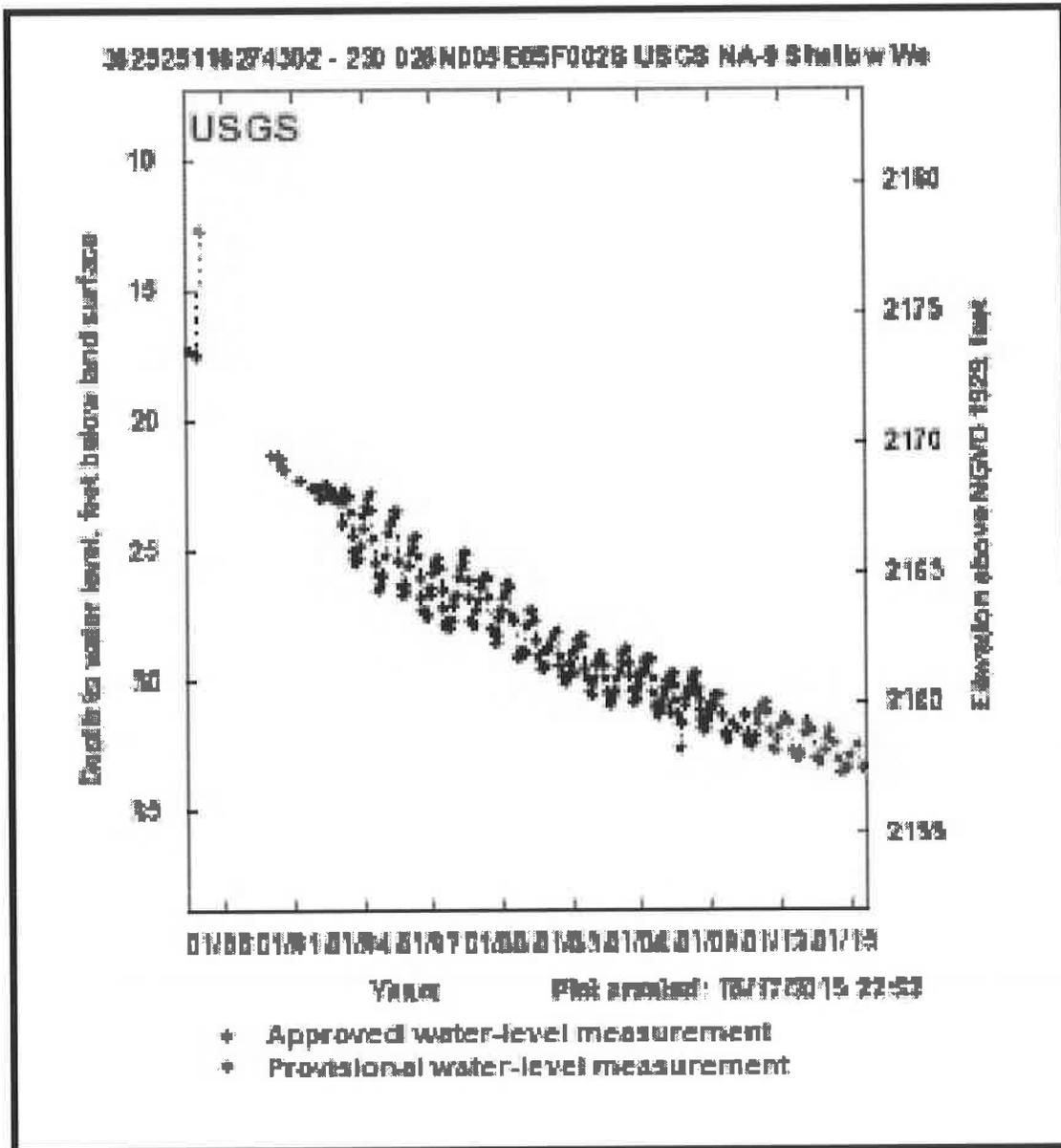


Figure 4-1. Hydrograph for USGS Monitoring Well NA-9



TABLES

Table 3-1
Mean Annual Flow
 Amargosa River
 California/Nevada

Year	Discharge (cfs)				
	Station 1	Station 2	Station 3	Station 4	Station 5
1962	ND	1.04	ND	ND	ND
1963	ND	2.54	ND	ND	ND
1964	ND	0.786	ND	ND	0.011
1965	ND	1.03	ND	ND	0.019
1966	ND	7.67	ND	ND	0.000
1967	ND	0.736	ND	ND	0.776
1968	ND	1.68	ND	ND	0.249
1969	ND	9.19	ND	ND	ND
1970	ND	1.36	ND	ND	ND
1971	ND	0.648	ND	ND	ND
1972	ND	0.626	ND	ND	ND
1973	ND	ND	ND	ND	ND
1974	ND	0.596	ND	ND	ND
1975	ND	0.722	ND	ND	ND
1976	ND	9.93	ND	ND	ND
1977	ND	8.80	ND	ND	ND
1978	ND	8.59	ND	ND	ND
1979	ND	0.567	ND	ND	ND
1980	ND	4.86	ND	ND	ND
1981	ND	1.06	ND	ND	ND
1982	ND	0.948	ND	ND	ND
1983	ND	14.9	ND	ND	ND
1984	ND	ND	ND	ND	ND
1985	ND	ND	ND	ND	ND
1986	ND	ND	ND	ND	ND
1987	ND	ND	ND	ND	ND
1988	ND	ND	ND	ND	ND
1989	ND	ND	ND	ND	ND
1990	ND	ND	ND	ND	ND
1991	ND	ND	ND	ND	ND
1992	ND	3.38	ND	0.046	ND
1993	ND	11.70	ND	0.095	ND
1994	ND	0.222	0.014	0.000	ND
1995	ND	6.36	0.220	1.72	ND
1996	ND	ND	ND	ND	ND
1997	ND	ND	ND	ND	ND
1998	ND	ND	ND	ND	ND
1999	ND	ND	ND	ND	ND
2000	1.82	0.726	ND	ND	ND
2001	1.14	0.864	ND	ND	ND
2002	ND	0.724	ND	ND	ND
2003	ND	5.23	ND	ND	ND
2004	ND	1.26	ND	ND	ND
2005	ND	11.1	ND	ND	ND

Table 3-1
Mean Annual Flow
 Amargosa River
 California/Nevada

Year	Discharge (cfs)				
	Station 1	Station 2	Station 3	Station 4	Station 5
2006	ND	0.629	ND	ND	ND
2007	ND	4.89	ND	ND	ND
2008	ND	0.512	ND	ND	ND
2009	ND	0.531	ND	ND	ND
2010	ND	1.52	ND	ND	ND
2011	ND	5.04	ND	ND	ND
2012	ND	0.370	ND	ND	ND
2013	ND	0.688	ND	ND	ND

Notes:

- Station 1 = USGS 10251375 Amargosa River at Dumont Dunes near Death Valley, San Bernardino County, California (Latitude 35°41'45", Longitude 116°15'02" NAD27).
- Station 2 = USGS 10251300 Amargosa River at Tecopa, Inyo County, California (Latitude 35°50'45", Longitude 116°13'45" NAD27).
- Station 3 = USGS 10251259 Amargosa River at Hwy 127 near Nevada State Line, Inyo County, California (Latitude 36°23'12", Longitude 116°25'22" NAD27).
- Station 4 = USGS 10251218 Amargosa River at Hwy 95 below Beatty, Nevada, Nye County, Nevada (Latitude 36°52'52", Longitude 116°45'04" NAD27).
- Station 5 = USGS 10251220 Amargosa River near Beatty, Nevada, Nye County, Nevada (Latitude 36°52'01.76", Longitude 116°45'37.53" NAD83).

ND = No Data
 Complete Annual Data Sets Only.

Table 3-2
Summary of Pumping
 Amargosa Desert
 Nevada

Year	Pumping (AFY)						Total Pumping
	Irrigation	Mining	Commercial	Quasi Municipal & Domestic	Other		
1983	9,105	125	20	250	NA	9,500	
1985	8,472	950	20	230	NA	9,672	
1986	6,553	550	10	125	NA	7,238	
1987	5,700	302	10	125	NA	6,137	
1988	2,978	996	10	125	NA	4,109	
1989	1,566	2,220	10	125	NA	3,921	
1990	4,953	2,720	10	125	NA	7,807	
1991	4,942	1,070	10	100	NA	6,122	
1992	5,761	2,293	10	100	NA	8,164	
1993	8,709	2,481	10	100	NA	11,300	
1994	9,977	2,508	10	100	NA	12,595	
1995	12,354	2,571	10	100	NA	15,035	
1996	11,043	2,285	205	50	30	13,613	
1997	10,454	2,506	576	366	0	13,902	
1998	12,040	2,417	537	382	0	15,376	
1999	10,835	2,389	593	364	0	14,181	
2000	9,711	1,366	1,057	378	10	12,522	
2001	9,407	1,187	1,067	396	10	12,067	
2002	9,576	1,302	1,128	415	0	12,421	
2003	10,471	1,356	1,324	437	0	13,588	
2004	10,603	1,169	1,319	453	0	13,544	
2005	10,764	438	1,332	466	4	13,004	
2006	13,124	527	1,844	491	2	15,988	
2007	14,059	377	1,793	505	2	16,736	
2008	12,356	1,108	3,984	517	2	17,967	
2009	11,477	510	3,905	487	1	16,380	
2010	9,898	313	4,683	498	1	15,393	
2011	11,258	321	4,458	499	0	16,536	
2012	13,190	174	3,756	502	0	17,622	

TABLE 3-1**GEOMETRIC MEAN HYDRAULIC CONDUCTIVITIES - GREAT BASIN MODFLOW MODEL**

Hydrogeologic Unit	Zones	Geometric Mean K (ft/day), un-weighted
Upper Basin-Fill Aquifer Unit	18	3.42
Lower Basin-fill Aquifer Unit	4	0.20
Volcanic Unit	15	0.06
Thrusted Lower Carbonate Aquifer Unit	2	0.01
Thrusted Non-Carbonate Confining Unit	3	0.03
Upper Carbonate Aquifer Unit	12	0.12
Upper Siliciclastic Confining Unit	3	0.01
Lower Carbonate Aquifer Unit	45	0.14
Non-Carbonate Confining Unit	23	0.01

APPENDIX A

(ZDON, DAVISSON & LOVE, 2015, IN PRESS)

APPENDIX B
CATALOG OF SPRINGS – MIDDLE AMARGOSA RIVER BASIN

INDEX TO CATALOG OF SPRINGS

Amargosa Canyon Springs	1
Amargosa River at Tecopa	9
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Amargosa River 4 (Dumont)	22
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Borax Spring	31
Borehole Spring	41
Chappo Spring	51
China Ranch Canyon Spring	62
Coyote Holes	67
Crystal Spring	70
Denning Spring	80
Dodge City Spring	86
Eagle Mountain Well	91
Five Springs	93
Grapevine Spring	101
Horse Thief Spring	102
Ibex Spring	112
Kingston Spring	119
Miller Spring	125

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Owl Hole Spring	129
Rabbithole Spring	136
Rhodes Spring	138
Salsberry Spring	143
Salt Creek / Spring	147
Saratoga Spring	155
Sheep Creek Spring	164
Sheephead Spring	171
Shoshone Spring	178
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APPENDIX C

**M.L. DAVISSON & ASSOCIATES REPORT – “CONSTRAINTS ON THE
RECHARGE SOURCES, FLOWPATHS, AND AGES OF GROUNDWATER
IN THE AMARGOSA RIVER VALLEY USING STABLE ISOTOPE,
WATER QUALITY AND NOBLE GAS DATA”**

APPENDIX D
CONCEPTUAL CROSS-SECTIONS – AMARGOSA RIVER

APPENDIX E
STEADY-STATE CARBONATE AQUIFER
MODEL SIMULATION RESULTS

ATTACHMENTS

Attachments for the Andy Zdon and Associates Technical Review Summary – Draft Supplement to U.S. Department of Energy’s Environmental Impact Statement for the Proposed Nuclear Fuel and High Level Radioactive Waste Repository at Yucca Mountain, Nevada are available upon request.

period on this information collection on March 18, 2015 (80 FR 14172).

1. *The title of the information collection:* "Billing Instructions for NRC Cost Type Contracts."

2. *OMB approval number:* 3150-0109.

3. *Type of submission:* Extension.

4. *The form number if applicable:*

None.

5. *How often the collection is required or requested:* Monthly and on occasion.

6. *Who will be required or asked to respond:* NRC Contractors.

7. *The estimated number of annual responses:* 1,506.

8. *The estimated number of annual respondents:* 41.

9. *An estimate of the total number of hours needed annually to comply with the information collection requirement or request:* 752.

10. *Abstract:* In administering its contracts, the NRC provides billing instructions for its contractors to follow in preparing invoices. These instructions stipulate the level of detail in which supporting data must be submitted for NRC review. The review of this information ensures that all payments made by the NRC for valid and reasonable costs are in accordance with the contract terms and conditions.

Dated at Rockville, Maryland, this 17th day of August, 2015.

For the Nuclear Regulatory Commission,
Tremaine Donnell,
NRC Clearance Officer, Office of Information Services.

[FR Doc. 2015-20666 Filed 8-20-15; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 040-09068; NRC-2008-0391]

Lost Creek ISR, LLC; Correction

AGENCY: Nuclear Regulatory Commission.

ACTION: Temporary Exemption; issuance; correction.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is correcting a notice that was published in the **Federal Register** on July 24, 2015, that gave notice to the public that it is considering issuance of a temporary exemption from certain NRC financial assurance requirements to Lost Creek ISR, LLC, for its Lost Creek *In Situ* Recovery (ISSR) Project in Crook County, Wyoming. This action is being taken to correct the date that the exemption expires.

DATES: This correction is effective on August 21, 2015.

ADDRESSES: Please refer to Docket ID NRC-2008-0391 when contacting the

NRC about the availability of information regarding this action. You may obtain publicly-available information related to this action using any of the following methods:

- *Federal Rulemaking Web site:* Go to <http://www.regulations.gov> and search for Docket ID NRC-2008-0391. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; email: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- *NRC's Agencywide Documents Access and Management System (ADAMS):* You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to pdr.resource@nrc.gov.

- *NRC's PDR:* You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: John Saxton, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-0697; email: John.Saxton@nrc.gov.

SUPPLEMENTARY INFORMATION: In the **Federal Register** of July 24, 2015 (80 FR 44158), on page 44160, first column, the Conclusions Section, the third sentence is corrected to read as follows: "This exemption will expire on February 10, 2017, for the Lost Creek ISR Project."

Dated in Rockville, Maryland, this 17th day of August, 2015.

For the Nuclear Regulatory Commission.

Andrew Persinko,

Deputy Director, Division of Decommissioning, Uranium Recovery and Waste Programs, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 2015-20719 Filed 8-20-15; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[Docket No. 63-001-HLW; NRC-2015-0051]

Department of Energy; Yucca Mountain, Nye County, Nevada

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft supplement to environmental impact statements; availability.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing for public comment the draft "Supplement to the U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," NUREG-2184. This supplements the U.S. Department of Energy's (DOE) 2002 Environmental Impact Statement (EIS) and its 2008 Supplemental EIS for the proposed repository in accordance with the findings and scope outlined in the NRC staff's 2008 Adoption Determination Report (ADR) for DOE's EISs. The scope of this supplement is limited to the potential environmental impacts from the proposed repository on groundwater and from surface discharges of groundwater. The NRC staff plans to hold four public meetings during the public comment period to present an overview of the supplement and to accept public comments on the draft supplement.

DATES: Submit comments on the supplement by October 20, 2015. Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any of the following methods:

- *Federal Rulemaking Web site:* Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0051. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; email: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- *Mail comments to:* Cindy Bladley, Office of Administration, Mail Stop: OWFN-12-H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

For additional direction on obtaining information and submitting comments, see "Obtaining Information and Submitting Comments" in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Christine Pineda, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-6789; email: YMEIS_Supplement@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2015-0051 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- Federal Rulemaking Web site: Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0051.
- NRC's Agencywide Documents Access and Management System (ADAMS): You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to pdr.resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.
- NRC's PDR: You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID NRC-2015-0051 in your comment submission. The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <http://www.regulations.gov> as well as enter the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that

they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Discussion

This supplement evaluates the potential environmental impacts on groundwater and impacts associated with the discharge of any contaminated groundwater to the ground surface due to potential releases from a geologic repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nye County, Nevada. This supplements DOE's 2002 "Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" and 2008 "Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," in accordance with the findings and scope outlined in the NRC staff's 2008 "Adoption Determination Report for the U.S. Department of Energy's Environmental Impact Statements for the Proposed Geologic Repository at Yucca Mountain." The ADR provides the NRC staff's conclusion as to whether it is practicable for the NRC to adopt DOE's EISs under the Nuclear Waste Policy Act of 1982, as amended. The NRC's decision on adoption of the EISs will occur after completion of the adjudication under part 2, subpart J of Title 10 of the *Code of Federal Regulations* (10 CFR).

The scope of this supplement is limited to those areas defined in the ADR, specifically, the potential environmental impacts from the proposed repository on groundwater and from surface discharges of groundwater. In the ADR, the NRC staff found that the analysis in DOE's EISs does not provide adequate discussion of the cumulative amounts of radiological and nonradiological contaminants that

may enter the groundwater over time and how these contaminants would behave in the aquifer and surrounding environments. This supplement provides the information the NRC staff identified in its ADR as necessary. The supplement describes the affected environment with respect to the groundwater flow path for potential contaminant releases from the repository that could be transported beyond the regulatory compliance location through the alluvial aquifer in Fortymile Wash and the Amargosa Desert, and to the Furnace Creek/Middle Basin area of Death Valley. The analysis in this supplement considers both radiological and nonradiological contaminants. Using groundwater modeling, the NRC staff finds that contaminants from the repository would be captured by groundwater withdrawal along the flow path, such as the current pumping in the Amargosa Farms area, or would continue to Death Valley in the absence of such pumping. Therefore, this supplement provides a description of the flow path from the regulatory compliance location to Death Valley, the locations of current groundwater withdrawal, and locations of potential natural discharge along the groundwater flow path. The supplement evaluates the potential radiological and nonradiological environmental impacts at these groundwater and surface discharge locations over a one-million year period following repository closure, including potential impacts on the aquifer environment, soils, ecology, and public health, as well as the potential for disproportionate impacts on minority or low-income populations. In addition, this supplement assesses the potential for cumulative impacts that may be associated with other past, present, or reasonably foreseeable future actions. The NRC staff finds that all of the impacts on the resources evaluated in this supplement would be SMALL.

III. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

Document	Adams accession No.
NRC Staff's Draft "Supplement to the U.S. Department of Energy's Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada," NUREG-2184	ML15223B243
NRC Staff's Adoption Determination Report	ML082420342
NRC Federal Register notice of intent to prepare a supplement to a final supplemental environmental impact statement	ML15058A595
DOE "Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada"	ML081750191

Document	Adams accession No.
DOE "Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada"	ML032690321

IV. Public Meetings

The NRC staff will hold a public conference call on August 26, 2015, from 2:00 p.m. until 3:00 p.m. Eastern Time. During this call, the NRC staff will provide information on how to submit comments on the draft supplement and answer any questions related to the public comment process. The staff will not be accepting comments on the draft supplement during this call. The teleconference number and passcode for this call will be made available on the NRC's public Web site, or you may call 301-415-6789 or email YMEIS_Supplement@nrc.gov.

In addition, the NRC staff plans to hold the following public meetings during the public comment period to present an overview of the supplement and to accept public comments on the document.

- September 3, 2015: NRC Headquarters, One White Flint North, First Floor Commission Hearing Room, 11555 Rockville Pike, Maryland 20852. This meeting will start at 3:00 p.m. Eastern Time and continue until 5:00 p.m.
- September 15, 2015: Embassy Suites Convention Center, 3600 Paradise Rd., Las Vegas, Nevada 89169. This meeting will start at 7:00 p.m. Pacific Time and continue until 9:00 p.m.
- September 17, 2015: Amargosa Community Center, 821 E. Amargosa Farm Road, Amargosa Valley, Nevada 89020. This meeting will start at 7:00 p.m. Pacific Time and continue until 9:00 p.m.
- October 15, 2015: Public meeting via conference call, from 2:00 p.m. Eastern Time until 4:00 p.m.

Additionally, at each of the meeting locations in Nevada, the NRC staff will host informal discussions during an open house for one hour prior to the meeting start time. Open houses will begin at 6:00 p.m. Pacific Time.

The public meetings will be transcribed and will include: (1) A presentation of the contents of the draft supplement; and (2) the opportunity for interested government agencies, organizations, and individuals to provide comments on the draft supplement. No oral comments will be accepted during the open house sessions prior to the public meetings in Nevada. To be considered, oral comments must be presented during the

transcribed portion of the public meeting. Written comments can be submitted to the NRC staff at any time during the public meetings. Persons interested in attending or presenting oral comments at any of the public meetings are encouraged to pre-register. Persons may pre-register to attend or present oral comments by calling 301-415-6789 or by emailing YMEIS_Supplement@nrc.gov no later than 3 days prior to the meeting. To provide oral comments, members of the public may also register in person at each meeting. Individual oral comments may be limited by the time available, depending on the number of persons who register. If special equipment or accommodations are needed to attend or present information at a public meeting, the need should be brought to the NRC's attention no later than 10 days prior to the meeting to provide the NRC staff adequate notice to determine whether the request can be accommodated. To maximize public participation, the NRC headquarters meeting on September 3, 2015, will be Web-streamed via the NRC's public Web site. On the meeting date, interested persons should go to the NRC's Live Meeting Webcast page to participate: <http://video.nrc.gov/>. The NRC headquarters meeting will also feature a moderated teleconference line so remote attendees will have the opportunity to present oral comments. To receive the teleconference number and passcode for the September 3 meeting or for the October 6 conference call, call 301-415-6789 or email YMEIS_Supplement@nrc.gov. Meeting agendas and participation details will be available on the NRC's Public Meeting Schedule Web site at <http://www.nrc.gov/publicinvolve/public-meetings/index.cfm> no later than 10 days prior to the meetings.

Dated at Rockville, Maryland, this 12th day of August 2015.

For the Nuclear Regulatory Commission.

James Rubenstone,

*Acting Director, Yucca Mountain Directorate,
Office of Nuclear Material Safety and
Safeguards.*

[FR Doc. 2015-20638 Filed 8-20-15; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION

[NRC-2015-0032]

Information Collection: Requests to Agreement States for Information

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of submission to the Office of Management and Budget; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has recently submitted a request for renewal of an existing collection of information to the Office of Management and Budget (OMB) for review. The information collection is entitled, "Requests to Agreement States for Information."

DATES: Submit comments by September 21, 2015.

ADDRESSES: Submit comments directly to the OMB reviewer at: Vlad Dorjets, Desk Officer, Office of Information and Regulatory Affairs (3150-0029) NEOB-10202, Office of Management and Budget, Washington, DC 20503; telephone: 202-395-7315, email: oir_submission@omb.eop.gov.

FOR FURTHER INFORMATION CONTACT: Tremaine Donnell, NRC Clearance Officer, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-6258; email: INFOCOLLECTS.Resource@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2015-0032 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- Federal rulemaking Web site: Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0032.
- NRC's Agencywide Documents Access and Management System (ADAMS): You may obtain publicly-available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS,



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only:
AGENDA NUMBER

28

- Consent Hearing
 Departmental
 Correspondence Action
 Public
 Scheduled Time for 11:30a.m.
 Closed Session
 Informational

FROM: HEALTH & HUMAN SERVICES – Mental Health

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Ordinance establishing fees for the Inyo County Mental Health Program

DEPARTMENTAL RECOMMENDATION:

Request Board A) conduct a public hearing on an ordinance titled "An Ordinance of the Board of Supervisors of the County of Inyo, State of California, Repealing Ordinance No. 1189, and Revising Inyo County Community Mental Health Services Fees;" and B) waive the first reading of the ordinance and schedule the adoption for 11:30 a.m., Tuesday, November 24, 2015, in the Board of Supervisors Room, at the County Administrative Center, in Independence.

CAO RECOMMENDATION:

SUMMARY DISCUSSION:

Effective in Fiscal Year 2012/13, Assembly Bill (AB) 1297 directed the Department of Health Care Services (DHCS) to reimburse Short Doyle Medi-Cal Federal Financial Participation (FFP) to County Mental Health Plans (MHP's) based upon their certified actual costs. To accomplish this, DHCS decided to use counties' most recently filed cost report rates adjusted for inflation as a reasonable method to approximate counties' actual costs. MHSD Information Notice No.: 12-06 outlines this methodology in detail. The DHCS interim rates for each fiscal year serve as the new maximum counties are allowed to bill to Short Doyle Medi-Cal.

Inyo County Mental Health services fees were last updated in October 2014 to align with DHCS' recommended 2014/15 rates at that time. For Fiscal Year 2015/16, DHCS is using the most recently filed cost report from FY 2013/14 as the basis to approximate counties' actual costs. DHCS has already programmed the new rates for each county into the Short Doyle II billing system and are effective now for services provided after June 30, 2015. The interim payments derived from these new rates will be settled to the lower of costs or charges via the annual cost report settlement process.

The changes to Inyo County's rates are as follows: Mental Health Services (includes Intensive Home Based Services, Plan Development, Rehabilitation, Group, Collateral, and Individual Therapy) rates went from \$3.51 per minute to \$3.61 per minute. Therapeutic Behavioral Services rates went from \$3.51 per minute to \$3.24 per minute; Medication Support rate went from \$5.90 per minute to \$6.06 per minute; Crisis Intervention rate went from \$3.85 per minute to \$3.95 per minute; and Case Management Brokerage and Intensive Care Coordination rates went from \$4.84 per minute to \$4.98 per minute.

ALTERNATIVES:

Your board could deny this request; Inyo County Mental Health would continue to claim Short Doyle Medi-Cal – FFP funds at its 2013 - approved rates, which would be counter to the DHCS' requirement to claim for service reimbursement based upon an approximation of actual costs. Also, it is prudent to align

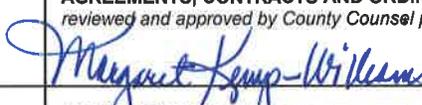
our charges as closely as possible to our costs in order to minimize charges subject to recoupment at cost settlement time.

OTHER AGENCY INVOLVEMENT:

Department of Health Care Services

FINANCING:

Short Doyle Medi-Cal - Federal Financial Participation funds. Realignment and MHSA act as matching funds. The FFP revenue will be deposited in Mental Health (045200), object code Mental Health Medi-Cal (4748).

<u>APPROVALS</u>	
COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS (Must be reviewed and approved by County Counsel prior to submission to the Board Clerk.)  Approved: <u>✓</u> Date: <u>11/23/15</u>
AUDITOR/CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS (Must be reviewed and approved by the Auditor/Controller prior to submission to the Board Clerk.)  Approved: <u>eyes</u> Date: <u>11/5/2015</u>
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS (Must be reviewed and approved by the Director of Personnel Services prior to submission to the Board Clerk.) Approved: _____ Date: _____
BUDGET OFFICER:	BUDGET AND RELATED ITEMS (Must be reviewed and approved by the Budget Officer prior to submission to the Board Clerk.) Approved: _____ Date: _____

DEPARTMENT HEAD SIGNATURE:
(Not to be signed until all approvals are received)  Date: 11-9-15

ORDINANCE NO. _____

AN ORDINANCE OF THE BOARD OF SUPERVISORS
OF THE COUNTY OF INYO, STATE OF CALIFORNIA,
REVISING INYO COUNTY COMMUNITY
MENTAL HEALTH SERVICE FEES

The Board of Supervisors of Inyo County ordains as follows:

Section I: INTENT

Inyo County currently charges mental health fees for mental health services provided by the County. These fees are only charged to those who are able to pay them. These fees were last adopted on October 14, 2014. The intent of this ordinance is to adjust those fees in accordance with Assembly Bill (AB) 1297, which directs the California Department of Health Care Services (DHCS) to reimburse Mental Health Plans (MHP) based upon an approximation of their actual costs. DHCS has determined that a reasonable approximation of the MHP's cost is the calculation of costs using its prior year's certified cost report. DHCS has released an Interim Rate table for Fiscal Year 2015/16 using Fiscal Year 2013/14 cost report. Inyo County Mental Health intends to charge fees in keeping with the designated rates that are set forth by DHCS.

Section II: PURPOSE

The purpose of this ordinance is to adjust fees, based on the rates set forth by DHCS for the provision of mental health services to recover the costs of providing the program.

Section III: AUTHORITY

Welfare and Institutions Code (W&I), Sections 5709 and 5710 authorize the County to charge for mental health services in accordance with W&I section 14708. DHCS considers the rates in the most recently filed certified cost reports as a reasonable means of approximating the County's certified public expenditures. DHCS will claim federal reimbursement for each MHP based upon an approximation of its actual cost of providing the services without exceeding the contract upper payment limit that is applied to each MHP.

Section IV: FEES

The County of Inyo Community Mental Health Program fees are hereby established as follows:

INYO COUNTY MENTAL HEALTH SERVICES SCHEDULE OF FEES

MODE OF SERVICE	SERVICE DESCRIPTION	FEE (per minute of service)
Outpatient Services	Mental Health Services	3.61
Outpatient Services	Intensive Home Based Services	3.61
Outpatient Services	Therapeutic Behavioral Services	3.24
Outpatient Services	Medication Support	6.06
Outpatient Services	Crisis Intervention	3.95
Outpatient Services	Case Management Brokerage	4.98
Outpatient Services	Intensive Care Coordination	4.98

Section V: SERVICE

The activities included within the Service Description are defined in Title 9, California Code of Regulations (CCR), Section 543: Title 22, CCR, Section 51341.

Section VI: UNITS OF SERVICE

The fee for each Service shall be the exact number of minutes used by staff providing a reimbursable services, pursuant to Title 9, CCR, Section 1840.316, and such amendments thereto and superseding documents as promulgated from time to time by the State of California, Department of Health Care Services.

Section VII: DETERMINATION OF FEE FOR INDIVIDUAL

The exact amount of the fee charged to each individual for a Service may be less than the maximum fee established pursuant to Section IV and VI herein, subject to the minimum annual fee for service set forth in this Section VII. Such exact fee for an individual shall be determined based upon ability to pay in accordance with the "Uniform Method of Determining Ability to Pay" pursuant to W&I Section 14711 and set forth in MHSD Information Notice 12-06, and such amendments and/or superseding documents as are promulgated from time to time by the State of California, Department of Health Care Services.

Section VIII: APPLICATION TO DEFINED SERVICES ONLY

This Ordinance shall apply only to the Services expressly designated and defined herein, and not to any other services and associated rates, fees, or charges which the County of Inyo is authorized to charge or collect pursuant to other applicable law.

Section IX: COUNTY ORDINANCE 1185 REPEALED

On the effective date of this Ordinance, Ordinance No. 1189, Revising Inyo County Community Mental Health Service Fees is repealed.

Section X: EFFECTIVE DATE

This Ordinance shall take effect and be in full force and effect, except as herein limited, thirty (30) days after its adoption. Before the expiration of fifteen (15) days from the adoption hereof, a summary of this Ordinance shall be published once in a newspaper of general circulation printed and published in the County of Inyo, State of California in accordance with Government Code Section 25124 (b). The Clerk of the Board is hereby instructed and ordered to so publish a summary of this Ordinance together with the names of the Board members voting for and against same.

PASSED AND ADOPTED this _____ day of _____, 2015.

AYES:
NOES:
ABSENT:
ABSTAIN:

Matt Kingsley, Chair
Inyo County Board of Supervisors

ATTEST: Kevin Carunchio
Clerk of the Board

By: _____
Patricia Gunsolley, Assistant Clerk of the Board



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only:
AGENDA NUMBER
29

- Consent Departmental Correspondence Action Public Hearing
 Scheduled Time for 11:45 a.m. Closed Session Informational

FROM: Inyo County Planning Department/Commission

FOR THE BOARD MEETING OF: November 17, 2015

SUBJECT: Road Abandonment No. 2015-01/Aspendell Mutual Water Company

DEPARTMENTAL RECOMMENDATION: Requests your Board of Supervisors:

- 1) Conduct a Public Hearing on a proposed resolution entitled "A Resolution of the Board of Supervisors of the County of Inyo, State of California, Declaring the Vacation and Abandonment of That Portion of an Unnamed Road in the Community of Aspendell"; and
- 2) Adopt the attached Resolution.

SUMMARY DISCUSSION: The applicant is requesting a road abandonment of an approximate 5,000-sq.ft. section of an unnamed road located in the community of Aspendell, CA, approximately 17-miles southwest of the City of Bishop, CA, between tax assessor parcels (APN) APN 014-294-09 (west) and, APN 014-294-07 and APN 014-294-08 (east). The site is currently vacant and the County Road Department stores snow from plowing on it in the winter. The applicant is requesting this abandonment, so that the adjacent property owners, located to the east of the abandonment, can convey the land to Aspendell Mutual Water Company. The water company will subsequently build a well and well house on the property to provide potable water to the community of Aspendell.

At the October 27, 2015 meeting of the Board of Supervisors, your Board adopted a Resolution entitled "A Resolution of the Board of Supervisors of the County of Inyo, State of California, Declaring its Intent to Vacate That Portion of an Unnamed Road in the Community of Aspendell and Setting and Providing Notice of a Public Hearing on Said Vacation." This Notice of Intent was posted and published in accordance with California Streets and Highways Code Sections 8320, et seq.

The proposed Resolution declares the vacation and abandonment of the aforementioned County right-of-way. Should your Board adopt the proposed Resolution, the Vacation shall be complete.

ALTERNATIVES: Your Board can decline to adopt the attached Resolution vacating said portion of an unnamed road in the community of Aspendell. This alternative is not recommended, as Aspendell Mutual Water Company seeks to provide potable water to the community of Aspendell. Moreover, the the road is unnecessary since it is a dead-end road and will not restrict access to any parcels.

OTHER AGENCY INVOLVEMENT: Inyo County Road Department.

FINANCING: No direct impact.

APPROVALS	
COUNTY COUNSEL:	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS <i>(Must be reviewed and approved by county counsel prior to submission to the board clerk.)</i>  Yes 11/03/15
AUDITOR/CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS <i>(Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.)</i>
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS <i>(Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)</i>

DEPARTMENT HEAD SIGNATURE:
(Not to be signed until all approvals are received)

 _____ Date: 11/9/15

Attachments:

- (1) Proposed Board Resolution
- (2) Exhibit A: Vicinity Map, Exhibit Map, and Legal Description
- (3) Board of Supervisors Resolution No. 2015-XX
- (4) Planning Commission Resolution No. 2015-01
- (5) Planning Commission Staff Report

Attachment 1: Proposed Board Resolution

RESOLUTION NO. 2015 -

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO, STATE OF CALIFORNIA, DECLARING THE VACATION AND ABANDONMENT OF THAT PORTION OF AN UNNAMED ROAD IN THE COMMUNITY OF ASPENDELL

WHEREAS, it appears to be in the best interest of the County of Inyo to abandon certain public roadways or portions thereof, hereinafter described; and

WHEREAS, on October 27, 2015 the Board of Supervisors of Inyo County, California adopted Resolution No. 2015-55 and thereby declared its intent to vacate that portion of an unnamed road in the community of Aspendell, and set a date of November 17, 2015 and a time of 11:45 a.m., for a public hearing before the Board of Supervisors of Inyo County, California on the issue of said vacation; and

WHEREAS, the Board of Supervisors of Inyo County, California finds that notice of the hearing set by Resolution No. 2015-55 was duly given by the publication and posting of that Resolution, in accordance with its terms; and

WHEREAS, the Board of Supervisors of Inyo County, California, has found and determined it is desirable and in the public interest to vacate that portion of the unnamed road in the community of Aspendell; and

WHEREAS, the vacation of said roadway will not eliminate required access to contiguous properties.

NOW, THEREFORE, BE IT RESOLVED the Board of Supervisors of Inyo County, California finds from all of the evidence submitted that: 1) the approximate 5,000-sq. ft. section of an unnamed road in the community of Aspendell, more specifically described as, A portion of the State of California, located in an unincorporated area of the County of Inyo, lying within the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 20, Township 8 South, Range 31 East, Mount Diablo Baseline and Meridian. Said Northeast $\frac{1}{4}$ of Section 20 also being located within the Aspendell Subdivision Tract No. 1 as recorded in Book 2 of Maps, Page 28, of Inyo County Official Records. Said portion being a forty foot wide strip of land.; 2) the vacation of said roadway will not cut off necessary access to any contiguous parcels; 3) the portion of said roadway and the underlying right-of-way are not useful as a non-motorized transportation facility; and 4) this portion of an unnamed road in the community of Aspendell is therefore unnecessary for present and prospective access.

BE IT FURTHER RESOLVED AND ORDERED, by the Board of Supervisors of Inyo County, California, that it adopts and incorporates herein the recitals and findings

set forth above and below and for the reasons stated herein, hereby vacates that portion of an unnamed road as described in Exhibit A attached to this Resolution.

BE IT FURTHER RESOLVED, that the Board of Supervisors of Inyo County, California adopts the following findings and conditions of approval for Road Abandonment #2015-01/Aspendell Mutual Water Company:

REQUIRED FINDINGS

1. Find that the project does not conflict with nor is it contrary to the Inyo County General Plan's goals and policies.

[Evidence: This project does not conflict with the Inyo County General Plan. On September 23, 2015 the Inyo County Planning Commission adopted Resolution No.2015-01 in which the Commission found the proposed abandonment to be in conformance with the General Plan.

2. Find that the Zoning and General Plan boundaries will extend from the east of boundary of the parcel of land (APN 014-294-09) located directly west of the area to be abandoned to the west boundaries of the parcels of land (APN 014-294-07 and APN 014-294-08) located directly east of the area of abandonment.

[Evidence: Inyo County Code Section 18.03.090 gives the the Board of Supervisors of Inyo County, California the authority to determine the boundaries of any district. By extending the boundary to incorporate the entire area being abandoned ensures that the abandoned portion of road will remain consistent with the General Plan and Zoning designations of the adjacent parcels.]

CONDITIONS OF APPROVAL FOR ROAD ABANDONMENT #2015-01/ASPENDELL MUTUAL WATER COMPANY

1. Hold Harmless:

As a condition of approval of Road Abandonment #2015-01/Aspendell Mutual Water Company, the applicant, landowner, and/or operator shall defend, indemnify and hold harmless Inyo County (County), its agents, officers and employees from any claim, action or proceeding against the County, its advisory agencies, appeal boards, or its legislative body concerning Road Abandonment #2015-01/Aspendell Mutual Water Company.

BE IT FURTHER RESOLVED AND ORDERED that the Clerk of the Board of Supervisors of Inyo County, California shall cause a certified copy of this Resolution of Vacation, attested by the Clerk under Seal, to be recorded in accordance with Streets and Highways Code section 8325.

PASSED AND ADOPTED ON THIS 17th DAY OF NOVEMBER, 2015 BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSTAIN:

ABSENT:

Matt Kingsley, Chair
Inyo County Board of Supervisors

ATTEST:
KEVIN CARUNCHIO
Clerk of the Board

By:

Pat Gunsolley, Assistant

Attachment 2: Exhibit A: Vicinity Map, Exhibit Map, and Legal Description

EXHIBIT "A"
DESCRIPTION OF EXISTING ROAD
TO BE ABANDONED

A PORTION OF THE STATE OF CALIFORNIA, LOCATED IN AN UNINCORPORATED AREA OF THE COUNTY OF INYO, LYING WITHIN THE NE 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 8 SOUTH, RANGE 31 EAST, MOUNT DIABLO BASELINE & MERIDIAN. SAID NORTHEAST 1/4 OF SECTION 20 ALSO BEING LOCATED WITHIN THE ASPENDELL SUBDIVISION TRACT No. 1 AS RECORDED IN SUBDIVISION MAP BOOK 2, PAGE 28 OF INYO COUNTY OFFICIAL RECORDS. SAID PORTION BEING A FORTY FOOT WIDE STRIP OF LAND THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE NORTHEAST ONE-QUARTER OF THE SOUTHWEST 1/4 OF SAID SECTION 20, SAID CORNER BEING MARKED BY A ONE AND ONE HALF INCH DIAMETER IRON PIPE;
THENCE SOUTH 89° 30' 15" EAST, 510.64 FEET MORE OR LESS ALONG THE SOUTH LINE OF SAID NORTH EAST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 20, TO THE CENTERLINE OF COLUMBINE DRIVE AS SHOWN ON SAID ASPENDELL SUBDIVISION TRACT No. 1 MAP, SAID CENTERLINE POINT BEING MARKED BY A ONE INCH IRON PIPE WITH BRASS TAG STAMPED 'RCE 10467', THENCE NORTH 7° 19' EAST, 173.12 FEET, MORE OR LESS, ALONG SAID CENTERLINE OF COLUMBINE DRIVE TO A POINT, SAID POINT BEING MARKED BY A STEEL SPIKE,;
THENCE SOUTH 15° 00' EAST, ALONG THE CENTERLINE OF AN UNNAMED ROAD AS SHOWN ON SAID ASPENDELL SUBDIVISION TRACT No. 1 MAP, 52.85 FEET MORE OR LESS TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF SAID COLUMBINE DRIVE, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;

THENCE SOUTH 15° 00' EAST, 125.54 FEET MORE OR LESS, TO THE SOUTH LINE OF SAID NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 20.

THE SIDELINES OF SAID EASEMENT TO BE EXTENDED OR SHORTENED TO MEET AT ANGLE POINTS AND TO TERMINATE AT THE SOUTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 20.

END OF DESCRIPTION

THE TOTAL AREA OF SAID PORTION BEING ±5000.40 SQ. FT. or 0.11 ACRES.

THIS REAL PROPERTY DESCRIPTION WAS PREPARED BY
RAYMOND WARBURTON, P.L.S. No. 8007, IN CONFORMANCE WITH THE
PROFESSIONAL LAND SURVEYOR'S ACT.
DATED: 2/23/2015

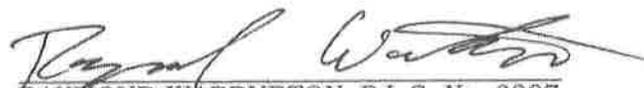
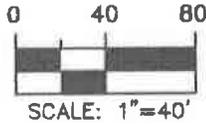

RAYMOND WARBURTON, P.L.S. No. 8007





EXHIBIT "B"

PLAT OF ROAD ABANDONMENT
BEING A PORTION OF THE NE 1/4 OF THE SW 1/4 OF
SECTION 20, T.8 S., R. 21 E., M.D.B.&M.



ASPENDELL SUBDIVISION
TRACT No. 1
MB 2, PAGE 28
INYO COUNTY O.R.



SPIKE IN PAVEMENT

COLUMBINE DRIVE

LOT 58

LOT 61

LOT 59

LOT 60

HATCHED AREA TO BE ABANDONED

1.5" IRON PIPE, RCE 10467
SW CORNER NE 1/4, SW 1/4
SEC. 20

S89°30'15"E

510.64'

1/2" IRON PIPE
RCE 10467
BELOW PAVEMENT

INYO NATIONAL FOREST

N07°19'E 173.12'

52.85'

S15°00'E

125.45'

S15°00'E

S15°00'E 178.31' (R)

20.00'

20.00'

Aspendell



Area of Proposed Abandonment

Attachment 3: Board of Supervisors Resolution No. 2015-55

RESOLUTION NO. 2015 - 55

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO, STATE OF CALIFORNIA, DECLARING ITS INTENT TO VACATE THAT PORTION OF AN UNNAMED ROAD IN THE COMMUNITY OF ASPENDELL AND SETTING AND PROVIDING NOTICE OF A PUBLIC HEARING ON SAID VACATION

WHEREAS, on April 23, 2015, an application to vacate that portion of an unnamed road in the community of Aspendell, CA was submitted to the County by Aspendell Mutual Water Company; and

WHEREAS, on September 23, 2015 the Planning Commission found that the road vacation proposed by the applicant is consistent with the Inyo County General Plan, pursuant to Government Code Section 65402, and exempt from the California Environmental Quality Act under the General Rule 15061(b), and adopted a Resolution recommending that the Board of Supervisors approve said abandonment and that the applicant indemnify and hold the County harmless for and from any action associated with said approval; and

WHEREAS, an abandonment shall be conducted pursuant to Chapter 3, Part 3, Division 9 of the California Streets and Highways Code, which permits the Board of Supervisors to initiate proceedings to vacate a County right-of-way by declaring its intent to vacate said right-of-way and setting a hearing on the proposed vacation, by order.

NOW, THEREFORE, BE IT RESOLVED that this Board of Supervisors hereby declares its intent to vacate portions of County right-of-ways described as follows: A portion of the State of California, located in an unincorporated area of the County of Inyo, lying within the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 20, Township 8 South, Range 31 East, Mount Diablo Baseline and Meridian. Said Northeast $\frac{1}{4}$ of Section 20 also being located within the Aspendell Subdivision Tract No. 1 as recorded in Book 2 of Maps, Page 28, of Inyo County Official Records. Said portion being a forty foot wide strip of land.

BE IT FURTHER RESOLVED, that in accordance with Chapter 3, Part 3, Division 9 of the California Streets and Highways Code, this Board of Supervisors hereby sets a hearing on the aforementioned proposed roadway vacation to be conducted before it on the 17th day of November, 2015, at 11:45a.m., in the Board of Supervisors Room, County Administrative Center, Independence, California; and

BE IT FURTHER RESOLVED that this Notice of Intent shall be posted and published in accordance with California Streets and Highways Code Sections 8320 et seq.

**PASSED AND ADOPTED ON THIS 27th DAY OF OCTOBER, 2015 BY THE
FOLLOWING VOTE:**

AYES: Supervisors Totheroh, Griffiths, Pucci, Tillemans & Kingsley

NOES: -0--

ABSTAIN: -0-

ABSENT: -0--



Matt Kingsley, Chair
Inyo County Board of Supervisors

ATTEST:
KEVIN CARUNCHIO
Clerk of the Board

By: 
Pat Gunsolley, Assistant

Attachment 4: Board of Supervisors Agenda Request Form 10/27/2015



AGENDA REQUEST FORM
BOARD OF SUPERVISORS
COUNTY OF INYO

For Clerk's Use Only: AGENDA NUMBER

- Consent Departmental Correspondence Action Public Hearing
 Scheduled Time 11:45 Closed Session Informational

FROM: Inyo County Planning Department/Commission

FOR THE BOARD MEETING OF: October 27, 2015

SUBJECT: Road Abandonment No. 2015-01/Aspendell Mutual Water Company

DEPARTMENTAL RECOMMENDATION: Requests your Board of Supervisors:

1. Consider a proposed resolution entitled "A Resolution of the Board of Supervisors of the County of Inyo, State of California, Declaring its Intent to Vacate That Portion of an Unnamed Road in the Community of Aspendell and Setting and Providing Notice of a Public Hearing on Said Vacation";
2. Adopt the attached Resolution (See Attachment 1);
3. Set a public hearing pursuant to the California Streets and Highways Code (hereafter "SHC") for November 17, 2015 at 11:45 a.m., which is not less than fifteen (15) days after the initiation of proceedings, held today on October 27, 2015;
4. Direct the Planning Department staff and/or the Board Clerk to post notices in a daily, semiweekly, or weekly newspaper for a period of at least two successive weeks prior to the November 17, 2015 hearing;
5. Direct the Planning Department staff and/or Board Clerk to post at least three (3) conspicuous notices of vacation along the lines of the road proposed to be vacated, with each notice posted not more than three hundred (300) feet apart;
6. Direct that the notice shall contain a description of the road proposed to be vacated and a reference to a map or plan that shows the portion or area to be vacated, including a statement that the vacation proceeding is conducted under Chapter 3 of the SHC, codified as sections 8320 et seq.; and
7. Direct that the notice shall contain the date, hour, and place for hearing all persons interested in the proposed vacation.

SUMMARY DISCUSSION:

The applicant, Aspendell Mutual Water Company, is requesting a road abandonment of an approximate 5,000-sq.ft. section of an unnamed road located in the community of Aspendell, CA, approximately 17-miles southwest of the City of Bishop, CA, between tax assessor parcels (APN) APN 014-294-09 (west); and, APN 014-294-07 and APN 014-294-08 (east). The site is currently vacant and the County Road Department stores snow from plowing on it in the winter. The portion of the road proposed to be abandoned dead-ends at the north end of a large vacant parcel under the management of the US Forest Service (APN 014-030-12). Currently, the owners of the two residential parcels located to the east of the proposed abandonment that could be accessed by this unnamed road, are not using it. They have indicated that they do not want to use it, and have given the applicant written permission to pursue the road abandonment, as required (See Attachment 2 - Exhibit A: Legal Description; Exhibit B: Map and Vicinity Map; and Attachment 3 - Consent to Road Abandonment). The property directly to the west of the proposed abandonment is currently owned by the County and is used for snow storage in the winter. The County Road Department has stated that it wants to keep the west half of the abandonment to continue to store snow on it from winter plowing.

The owners of the properties located to the east of the abandonment have agreed to convey the land to Aspendell Mutual Water Company, which is considered a public utility. The owners will convey the land as provided for in the County's Subdivision Ordinance 16.12.270, which includes the provision: "Any conveyance of land to a governmental agency, public entity or *public utility* shall not be considered a division of land for purposes of computing the number of parcels." (emphasis added.) Aspendell Mutual Water Company will subsequently build a well and well house on the property for the provision of potable water to the community of Aspendell.

On September 23, 2015, the Planning Commission found the proposed Road Abandonment No. 2015-01/Aspendell to be in conformance with the Inyo County General Plan, and the California Environmental Quality Act (CEQA) and adopted a Resolution recommending your Board approve the abandonment and that the applicant indemnify and hold the County harmless for and from any action associated with this approval (See Attachment 4 – Planning Commission Resolution and Staff Report).

Chapter 3, Part 3, Division 9 of the SHC, outlines the process by which a county right-of-way can be vacated. To initiate the vacation on your own initiative, or the petition of an interested person, pursuant to HSC section 8321(f), your Board must, by order, declare its intent to vacate said right-of-way and set the date, hour, and place of a public hearing to consider the vacation. If your Board adopts the attached resolution, the Planning Department and/or the Board Clerk will post and publish the Notice of Intent in accordance with SHC sections 8320, 8322, and 8323.

SHC section 8320 requires that the notice contain a description of the street proposed to be vacated and a reference to a map or plan. The map or plan must show the portion or area to be vacated. The notice must include a statement that the vacation proceeding is conducted under Chapter 3 of the SHC. The description of the street must include its general location, its lawful or official name or the name by which it is commonly known, and the extent to which it is to be vacated.

SHC section 8322 requires that the notice of the hearing on the proposed vacation be published for at least two successive weeks prior to the hearing. The publication must be through a daily, semiweekly, or weekly newspaper in Inyo County and is selected by your Board for the purpose of providing notice of a hearing on the proposed vacation. Alternatively, your Board can direct the Board Clerk or other responsible staff if your Board chooses not to select a newspaper.

SHC section 8323 requires that the notice of the hearing on the proposed vacation be posted conspicuously along the line of the street proposed to be vacated. The notices must be posted not more than three hundred (300) feet apart, but at least three consecutive notices must be posted. Since the proposed vacation is less than one (1) mile in length, the notices cannot be posted at each intersection and mid-way of an intersection of another street that intersects the street proposed to be vacated.

If your Board adopts the proposed Resolution declaring your intent to vacate a portion of the unnamed road and to set a hearing on the vacation of said portion of the unnamed road, then on November 17, 2015, at 11:45 a.m. or soon thereafter as the matter can be heard, your Board will need to conduct a public hearing on the vacation of said portion of the unnamed road, and consider a Resolution of Vacation. Upon adoption of the Resolution of Vacation, the Vacation will be complete.

ALTERNATIVES:

- Your Board can decline to adopt the attached Resolution of Intent to abandon said portions of an unnamed road in the community of Aspendell. This alternative is not recommended, as Aspendell

Mutual Water Company seeks to provide potable water to the community of Aspendell. Moreover, the road is unnecessary since it is a dead-end road that does not restrict access to any parcels and the surrounding owners have stated they do not want this access in the future.

- Direct staff to take alternative action(s).

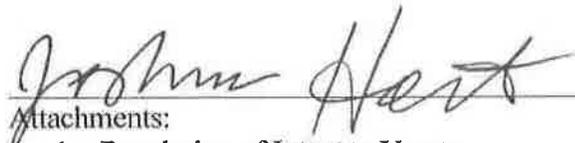
OTHER AGENCY INVOLVEMENT: Inyo County Road Department

FINANCING: No direct impact

<u>APPROVALS</u>	
COUNTY COUNSEL: 	AGREEMENTS, CONTRACTS AND ORDINANCES AND CLOSED SESSION AND RELATED ITEMS <i>(Must be reviewed and approved by county counsel prior to submission to the board clerk.)</i>
AUDITOR/ CONTROLLER:	ACCOUNTING/FINANCE AND RELATED ITEMS <i>(Must be reviewed and approved by the auditor-controller prior to submission to the board clerk.)</i>
PERSONNEL DIRECTOR:	PERSONNEL AND RELATED ITEMS <i>(Must be reviewed and approved by the director of personnel services prior to submission to the board clerk.)</i>

DEPARTMENT HEAD SIGNATURE:

(Not to be signed until all approvals are received)



Date: 10/20/15

Attachments:

1. Resolution of Intent to Vacate
2. Exhibit A: Legal Description; Exhibit B: Map and Vicinity Map
3. Consent to Road Abandonment
4. Planning Commission Resolution No. 2015-01 and Staff Report

Attachment 1: Resolution of Intent to Vacate

RESOLUTION NO. 2015 - ____

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO, STATE OF CALIFORNIA, DECLARING ITS INTENT TO VACATE THAT PORTION OF AN UNNAMED ROAD IN THE COMMUNITY OF ASPENDELL AND SETTING AND PROVIDING NOTICE OF A PUBLIC HEARING ON SAID VACATION

WHEREAS, on April 23, 2015, an application to vacate that portion of an unnamed road in the community of Aspendell, CA was submitted to the County by Aspendell Mutual Water Company; and

WHEREAS, on September 23, 2015 the Planning Commission found that the road vacation proposed by the applicant is consistent with the Inyo County General Plan, pursuant to Government Code Section 65402, and exempt from the California Environmental Quality Act under the General Rule 15061(b), and adopted a Resolution recommending that the Board of Supervisors approve said abandonment and that the applicant indemnify and hold the County harmless for and from any action associated with said approval; and

WHEREAS, an abandonment shall be conducted pursuant to Chapter 3, Part 3, Division 9 of the California Streets and Highways Code, which permits the Board of Supervisors to initiate proceedings to vacate a County right-of-way by declaring its intent to vacate said right-of-way and setting a hearing on the proposed vacation, by order.

NOW, THEREFORE, BE IT RESOLVED that this Board of Supervisors hereby declares its intent to vacate portions of County right-of-ways described as follows: A portion of the State of California, located in an unincorporated area of the County of Inyo, lying within the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 20, Township 8 South, Range 31 East, Mount Diablo Baseline and Meridian. Said Northeast $\frac{1}{4}$ of Section 20 also being located within the Aspendell Subdivision Tract No. 1 as recorded in Book 2 of Maps, Page 28, of Inyo County Official Records. Said portion being a forty foot wide strip of land.

BE IT FURTHER RESOLVED, that in accordance with Chapter 3, Part 3, Division 9 of the California Streets and Highways Code, this Board of Supervisors hereby sets a hearing on the aforementioned proposed roadway vacation to be conducted before it on the 17th day of November, 2015, at 11:45a.m., in the Board of Supervisors Room, County Administrative Center, Independence, California; and

BE IT FURTHER RESOLVED that this Notice of Intent shall be posted and published in accordance with California Streets and Highways Code Sections 8320 et seq.

**PASSED AND ADOPTED ON THIS 27th DAY OF OCTOBER, 2015 BY THE
FOLLOWING VOTE:**

AYES:

NOES:

ABSTAIN:

ABSENT:

**Matt Kingsley, Chair
Inyo County Board of Supervisors**

**ATTEST:
KEVIN CARUNCHIO
Clerk of the Board**

By: _____
Pat Gunsolley, Assistant

EXHIBIT "A"
DESCRIPTION OF EXISTING ROAD
TO BE ABANDONED

A PORTION OF THE STATE OF CALIFORNIA, LOCATED IN AN UNINCORPORATED AREA OF THE COUNTY OF INYO, LYING WITHIN THE NE 1/4 OF THE SW 1/4 OF SECTION 20, TOWNSHIP 8 SOUTH, RANGE 31 EAST, MOUNT DIABLO BASELINE & MERIDIAN. SAID NORTHEAST 1/4 OF SECTION 20 ALSO BEING LOCATED WITHIN THE ASPENDELL SUBDIVISION TRACT No. 1 AS RECORDED IN SUBDIVISION MAP BOOK 2, PAGE 28 OF INYO COUNTY OFFICIAL RECORDS. SAID PORTION BEING A FORTY FOOT WIDE STRIP OF LAND THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE NORTHEAST ONE-QUARTER OF THE SOUTHWEST 1/4 OF SAID SECTION 20, SAID CORNER BEING MARKED BY A ONE AND ONE HALF INCH DIAMETER IRON PIPE;

THENCE SOUTH 89° 30' 15" EAST, 510.64 FEET MORE OR LESS ALONG THE SOUTH LINE OF SAID NORTH EAST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 20, TO THE CENTERLINE OF COLUMBINE DRIVE AS SHOWN ON SAID ASPENDELL SUBDIVISION TRACT No. 1 MAP, SAID CENTERLINE POINT BEING MARKED BY A ONE INCH IRON PIPE WITH BRASS TAG STAMPED 'RCE 10467', THENCE NORTH 7° 19' EAST, 173.12 FEET, MORE OR LESS, ALONG SAID CENTERLINE OF COLUMBINE DRIVE TO A POINT, SAID POINT BEING MARKED BY A STEEL SPIKE,;

THENCE SOUTH 15° 00' EAST, ALONG THE CENTERLINE OF AN UNNAMED ROAD AS SHOWN ON SAID ASPENDELL SUBDIVISION TRACT No. 1 MAP, 52.85 FEET MORE OR LESS TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF SAID COLUMBINE DRIVE, SAID POINT ALSO BEING THE TRUE POINT OF BEGINNING;

THENCE SOUTH 15° 00' EAST, 125.54 FEET MORE OR LESS, TO THE SOUTH LINE OF SAID NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 20.

THE SIDELINES OF SAID EASEMENT TO BE EXTENDED OR SHORTENED TO MEET AT ANGLE POINTS AND TO TERMINATE AT THE SOUTH LINE OF SAID NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 20.

END OF DESCRIPTION

THE TOTAL AREA OF SAID PORTION BEING ±5000.40 SQ. FT. or 0.11 ACRES.

THIS REAL PROPERTY DESCRIPTION WAS PREPARED BY
RAYMOND WARBURTON, P.L.S. No. 8007, IN CONFORMANCE WITH THE
PROFESSIONAL LAND SURVEYOR'S ACT.
DATED: 2/23/2015

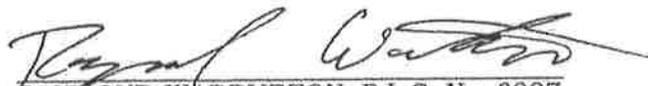
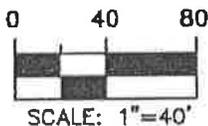

RAYMOND WARBURTON, P.L.S. No. 8007



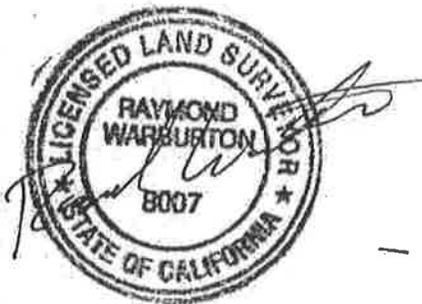


EXHIBIT "B"

PLAT OF ROAD ABANDONMENT
BEING A PORTION OF THE NE 1/4 OF THE SW 1/4 OF
SECTION 20, T.8 S., R. 21 E., M.D.B.&M.



ASPENDELL SUBDIVISION
TRACT No. 1
MB 2, PAGE 28
INYO COUNTY, O.R.



SPIKE IN PAVEMENT

COLUMBINE DRIVE

LOT 58

LOT 61

LOT 59

LOT 60

HATCHED AREA TO BE ABANDONED

1.5" IRON PIPE, RCE 10467
SW CORNER NE 1/4, SW 1/4
SEC. 20

S89°30'15"E

510.64'

1/2" IRON PIPE
RCE 10467
BELOW PAVEMENT

INYO NATIONAL FOREST

N07°19'E 173.12'

S15°00'E 52.85'

S15°00'E

20.00'

S15°00'E 125.45'

S15°00'E 178.31' (R)

20.00'

Aspendell



Area of Proposed Abandonment



Date: 6/27/15

To:
Inyo County Planning Department
PO Drawer L
Independence, CA 93526

From:
Thomas D. Morgan
Morgan Trust, Thomas D & P A, Aspendell Property Owner

APN: 014-29-408

Dear Inyo County Planning Department:

I hereby extend my permission to include my above referenced lot in the Road Abandonment Proposal #2015-01/ Aspendell Mutual Water Company.

Thomas D. Morgan
Signed

THOMAS D. MORGAN
Printed Name

Mailing Address:

410 Via Di ROMA Wk.
Long Beach, Calif.
90703

Date: 6/29/2015



To:
Inyo County Planning Department
PO Drawer L
Independence, CA 93526

From:
George E. Moss, Jr.
George E Moss Jr, Aspendell Property Owner

APN: 014-29-407

Dear Inyo County Planning Department:

I hereby extend my permission to include my above referenced lot in the Road Abandonment Proposal #2015-01/ Aspendell Mutual Water Company and have no interest in the property proposed to be abandoned.

George E. Moss, Jr.
Signed

George E. Moss, Jr.
Printed Name

Mailing Address:

Date: June 24, 2015



To:
Inyo County Planning Department
PO Drawer L
Independence, CA 93526

From:

PA Aspendell Property Owner Patricia Morgan
Morgan Trust, Thomas D & P A, Aspendell Property Owner

APN: 014-29-408

Dear Inyo County Planning Department:

I hereby extend my permission to include my above referenced lot in the Road Abandonment Proposal #2015-01/ Aspendell Mutual Water Company.

Patricia Ana Morgan
Signed

Patricia Ana Morgan
Printed Name

Mailing Address:

40 Via di Roma Walk
Lang Beach, Ca 90803

Attachment 4: Planning Commission Resolution 2015-01, and Staff Report

RESOLUTION NO. 2015-01

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF INYO, STATE OF CALIFORNIA, FINDING THAT PROPOSED ROAD ABANDONMENT #2015-01 ASPENDELL MUTUAL WATER COMPANY IS IN CONFORMANCE WITH THE INYO COUNTY GENERAL PLAN AND IS EXEMPT FROM THE REQUIREMENTS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT UNDER SECTION 15061(B) AND APPROVE ROAD ABANDONMENT 2015-01/ASPENDELL MUTUAL WATER COMPANY, SUBJECT TO CERTAIN CONDITIONS

WHEREAS, on April 23, 2015, the County of Inyo received an application to abandon a County right-of-way described as: A portion of the State of California, located in an unincorporated area of the County of Inyo, lying within the NE ¼ of the SW ¼ of Section 20, Township 8 South, Range 31 East, Mount Diablo Baseline and Meridian. Said Northeast ¼ of Section 20 also being located within the Aspendell Subdivision Tract No. 1 as recorded in Book 2 of Maps, Page 28, of Inyo County Official Records. Said portion being a forty foot wide strip of land . . .; and

WHEREAS, such an abandonment may be conducted pursuant to Chapter 3 of Part 3 of Division 9, commencing with Section 8320, of the Streets and Highways Code; and

WHEREAS, Government Code Section 65402 requires a proposed street abandonment to first be reviewed by the Planning Commission for a determination as to the proposal's conformance with the County General Plan; and

WHEREAS, the Planning Commission has found that the proposed road abandonment is consistent and in conformance with the Inyo County General Plan; and

WHEREAS, in accordance with the conditions necessary to identify viable candidates for street abandonment, the Planning Commission has determined the subject streets are not the sole route of access for any property in the vicinity and that the abandonment of said roadways will not cut off required access to contiguous properties; and

WHEREAS, the Inyo County Planning Department prepared a finding that Road Abandonment #2015-01/Aspendell Mutual Water Company is Exempt from the requirements of the California Environmental Quality Act (CEQA) under Section 15061(b) of the CEQA guidelines since there is no possibility that the activity in question would have a significant effect on the environment; and

WHEREAS, the Inyo County Planning Commission held a public hearing on September 23, 2015, to review and consider a request for the approval of Road

Abandonment 2015-01/Aspendell Mutual Water Company, and considered the staff report for the application and all oral and written comments regarding the application.

NOW, THEREFORE, BE IT RESOLVED, that, based on all of the written and oral comment and input received at the September 23, 2015, hearing, including the Planning Department Staff Report with the CEQA Exemption finding, concerning the above described proposed project, this Planning Commission finds Road Abandonment 2015-01/Aspendell Mutual Water Company to be in conformance with the Inyo County General Plan and the California Environmental Quality Act; and

BE IT FURTHER RESOLVED, that the Planning Commission makes, and recommends that the Board of Supervisors adopt, the following Conditions of Approval for the proposed project:

RECOMMENDED CONDITIONS OF APPROVAL:

1. Hold Harmless: the applicant, landowner, and/or operator shall defend, indemnify and hold harmless Inyo County, its agents, officers and employees from any claim, action, or proceeding against the County, its advisory agencies, appeal boards, or its legislative body concerning Road Abandonment #2015-01/Aspendell Mutual Water Company.
2. A Conveyance of land to the Aspendell Mutual Water Company from the properties owners of APN 014-294-07 and APN 014-294-08, located to the east of the abandonment is completed prior to the issuance of a building permit.
3. A Parcel Merger is completed on the two parcels that will be created from the Road Abandonment and subsequent conveyance to the Aspendell Mutual Water Company by the property owners prior to the issuance of a building permit; and

BE IT FURTHER RESOLVED, that the Planning Commission recommends that the Board of Supervisors:

1. Approve Road Abandonment #2015-01/Aspendell Mutual Water Company based on all of the information in the public record and on recommendation of the Planning Commission.

Passed and adopted this 23 day of September, 2015.

AYES: Corner, Stewart, Switzer

NOES: 0

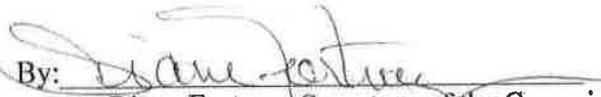
ABSTAIN: 0

ABSENT: Wahrenbrock, Gentry



Ross Corner, Vice Chairperson
Inyo County Planning Commission

ATTEST: Joshua Hart, AICP, Planning Director

By: 
Diane Fortney, Secretary of the Commission



Planning Department
168 North Edwards Street
Post Office Drawer L
Independence, California 93526

Phone: (760) 878-0263
FAX: (760) 878-0382
E-Mail: inyoplanning@inyocounty.us

AGENDA ITEM NO.: 5 (Action Item – Public Hearing)

PLANNING COMMISSION MEETING DATE: September 23, 2015

SUBJECT: Road Abandonment No. 2015-01/Aspendell Mutual Water Company (AMWC); Conditional Use Permit (CUP) 2015-02/AMWC; Variance 2015-01/AMWC.

EXECUTIVE SUMMARY

The applicant is requesting a road abandonment of an approximate 5,000-sqft section of an unnamed road located in the community of Aspendell, CA, approximately 17-miles southwest of the City of Bishop CA, between tax assessor parcels (APN) APN 014-294-09 (west); and, APN 014-294-07 and APN 014-294-08 (east). The site is currently vacant and the County road department stores snow from plowing on it in the winter. The portion of street proposed to be abandoned dead-ends at the north end of a large vacant parcel under the management of the US Forest Service (APN 014-030-12). To the North is Cardinal Road and residential development. The property directly to the west of the proposed abandonment is currently owned by the County and is used for snow storage in the winter. To the east the area proposed to be abandoned is bordered by two residential lots APN 014-294-07 and APN 014-294-08 (Attachment 1 map, legal description, and vicinity map). The area proposed to be abandoned will be bisected northwest to southeast; the west half will go to the County property located on the west and the other half will go to the two residential properties located on the east (Attachment 2, parcel configurations after abandonment).

The Public Streets, Highways, and Service Easements Vacation Law, set forth in Section 8300 et seq. of the California Street and Highway Code, allows a County Board of Supervisors to abandon a road under its jurisdiction upon making certain findings following a public hearing. Section 8313 of the Abandonment Law and Section 65402 of the Government Code, states that before the Board of Supervisors may order such abandonment, the County Planning Commission must review the proposed abandonment and find it is in conformance with the County's General Plan and adopt a resolution of their findings.

Concurrently with the abandonment, the applicant has requested that the property owners of the parcels located to the east of the area of abandonment convey the part of the abandonment that goes to APN 014-294-07 and APN 014-294-08 to the AMWC, and thereby create two new parcels. These parcels will be used for a well and well house to provide potable water to the community of Aspendell. This conveyance is allowed per the County's Subdivision Ordinance 16.12.270 that includes the statement: . . . Any conveyance of land to a governmental agency, public entity or public utility shall not be considered a division of land for purposes of computing the number of parcels. As used in this section, "agricultural purposes" means the cultivation of food or fiber or the grazing or pasturing of livestock.

Each half of the road abandonment area will automatically take on the General Plan and zoning designations of the parcels they are dissolved into. The zoning designations will be One-Family Residential with a 10,000-square-foot minimum (R1-10,000); and the General Plan will be Residential Low Density (RL). The R1 Zoning District allows for public/quasi-public uses as a conditional use, under 18.30.040 (C): utility, or public service facility, when operating requirements necessitate its location within the district, but not including a storage garage, machine shop or corporation yard. This location is necessary for the AMWC to provide potable water to the community as one of the two current wells is too high in arsenic and can no longer be used and the other does not have adequate output for fire protection services. This site is unique in that it can be obtained by the AMWC and has access to an adequate supply of potable water. The RL General Plan designation also allows for public/quasi-public uses. The applicant is requesting a Conditional Use Permit to put a well and well house on the property after it is abandoned and conveyed to the AMWC and a Variance to the required building site and setback requirements as the parcel will be too small to meet these standards.

PROJECT INFORMATION

Supervisory District:	1
Applicants:	Aspendell Mutual Water Company
Landowner:	Inyo County
Address:	All that portion of an unnamed road lying west of Cardinal Road as shown on Subdivision Book 2, page 28, in the community of Aspendell, CA, approximately 17-miles southwest of Bishop, CA.
Community:	Aspendell, CA
A.P.N.s:	N/A
General Plan:	N/A

Zoning: N/A

Size of Parcel(s): Section of road to be abandoned is approximately 5,000-sqft.

Surrounding Land Use:

Location:	Use:	Gen. Plan Designation	Zoning
Site	Vacant, used by County road department for winter snow storage	N/A	N/A
North	Cardinal Road, residential development	Residential Low Density (RL)	Residential One Family, 10,000sqft. minimum (R1-10,000)
East	Residential development	Residential Low Density (RL)	Residential One Family, 10,000sqft. minimum (R1-10,000)
South	Vacant/Open Space	State and Federal Land (SFL)	Open Space 40-acre minimum (OS-40)
West	Residential development.	Residential Low Density (RL)	Residential One Family, 10,000sqft. minimum (R1-10,000)

Recommended Action(s):

1) Conduct a public hearing and find that the proposed road abandonment RA 2015-01/AMWC is consistent with the Inyo County General Plan; and, find that RA 2015-01/AMWC is exempt from the requirements of the California Environmental Quality under Section 15061(b) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the roadway is pre-existing and is a paved dead-end street that is already disturbed; and, recommend the Board of Supervisors adopt the attached resolution approving the proposed abandonment.

2) Conduct a public hearing and conditionally approve CUP 2015-02/AMWC; and, find that CUP 2015-02/AMWC is exempt from the requirements of the California Environmental

Quality under Section 15061(b) (3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the roadway is pre-existing and is a paved dead-end street that is already disturbed.

3) Conduct a public hearing and conditionally approve Variance 2015-01/AMWC; and, find that Variance 2015-01/AMWC is exempt from the requirements of the California Environmental Quality under Section 15061(b) (3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the roadway is pre-existing and is a paved dead-end street that is already disturbed.

Alternatives:

1) Do not make a recommendation to the Board of Supervisors to approve the proposed road abandonment, and do not approve the Conditional Use Permit, or Variance thereby effectively recommending denial of these actions

2) Continue the public hearing to a future date, and provide specific direction to staff regarding additional information and analysis needed.

Project Planner:

Cathreen Richards

PROJECT DESCRIPTION

The applicant is requesting a road abandonment of an approximate 5,000-sqft section of Columbine Drive located in the community of Aspendell, approximately 17-miles from the City of Bishop, CA, between tax assessor parcels (APN) APN 014-294-09 (west); and, APN 014-294-07 and APN 014-294-08 (east). The site is currently vacant and the County road department stores snow from road plowing on it in the winter. The applicant has indicated that the eastern portion of the abandonment will be used for a well and well house for the provision of potable water to the community of Aspendell. There are three adjacent property owners. The two owners on the east side have given their written consent for the proposed road abandonment (Attachment 2). The County owns the property on the west and the County Public Works/Road Department has indicated that

they wish to keep the area of abandonment on the west side for the continued use of winter snow storage, but otherwise have not objections to the abandonment.

STAFF ANALYSIS

Road Abandonment

Site Description

The Aspendell subdivision final map was approved by the Inyo County Board of Supervisors on July 16, 1962. The original recorded subdivision map illustrates the dead-end section of an unnamed road, originating at the western edge of Cardinal Road and terminating at the northern edge of APN # 014-030-12 a large vacant parcel under the management of the US Forest Service. Because of the locational characteristics, this dead-end piece of road does not provide primary access to any of the parcels abutting it. The parcel located directly to the south APN #014-030-12 can be accessed by this dead end road, but it is also bordered by Highway-168 on its east side and can be accessed from Highway-168. It can also be accessed by Cardinal Road on the west. The two residential lots located directly east of the area proposed to be abandoned are accessed by Columbine Drive. Their back yards are adjacent to the area proposed to be abandoned but do not use it for access (Attachment 1, site map).

General Plan Consistency

Pursuant to Section 65402 of the Government Code, the vacation or abandonment of a road by a public agency must be reviewed by the planning agency for consistency with the general plan. The Planning Commission must make a determination that the proposed action is consistent with the general plan. While there are no specific General Plan policies within the Inyo County General Plan that apply directly to the vacation or abandonment of a roadway, there are policies within the General Plan relevant to the proposed action. The policies applicable to this project include:

Policy LU-2.14 - Access: The County shall require that adequate vehicle access is provided to all neighborhoods and developments consistent with the intensity of residential development.

Discussion: The portion of the road proposed to be abandoned currently dead-ends at the northern property line of a single parcel of land that is managed by the Forest Service. This parcel is vacant and can be accessed from Cardinal Road on the west and State Highway 168 on the east. The two residential properties located to the east of the proposed abandonment use Columbine Drive for access and the owners have given the applicant permission to pursue the abandonment (Attachment 2).

Policy LU-2.4: Residential Low Density (RL): This designation provides for single-family residential neighborhoods adjacent to existing communities or rural residential communities, public and quasi-public uses, and similar and compatible uses.

Discussion: The future use of the area proposed to be abandoned will include the continuation of the County road department storing plowed snow in the winter; and, the AMWC digging a well to provide potable water to the community of Aspendell. The RL General Plan designation allows for public, quasi-public uses and both of these proposed uses are considered public/quasi-public.

Zoning Ordinance Consistency

Chapter 18.30.040 Conditional Uses (C): *Utility, or public service facility, when operating requirements necessitate its location within the district, but not including a storage garage, machine shop or corporation yard*

Discussion: The future use of the area proposed to be abandoned will include the continuation of the County road department storing plowed snow in the winter and, the AMWC digging a well to provide potable water to the community of Aspendell. Both of these uses are considered public uses and the AMWC is requesting a conditional use permit for a well and well house to provide water to the community of Aspendell that is in compliance with 18.30.040(C). The new parcels will not meet the development standards of the R1-10,000 zoning district; and, therefore the applicant is also asking for a Variance on the building site and setback requirements.

Access/Traffic

The portion of the road proposed to be abandoned is a dead-end street that terminates at the northern property line of the parcel located directly to the south. This and the residential properties located on the east could be accessed by this dead end section of road. The access from this dead end road is not used by any of the adjacent properties, nor is it necessary for the provision of access; therefore, there will be no loss of access to the properties if the road abandonment is completed. The parcel on the south can be accessed by Highway-168 and by Cardinal Road. The two residential lots located directly east of the area proposed to be abandoned are accessed by Columbine Drive. Their back yards are adjacent to the area proposed to be abandoned, but do not use it for access.

Public Services

Sewer:	CSA 2, Inyo County
Water:	Aspendell Mutual Water Company
Fire:	Aspendell South Fork Volunteer Fire Department
Law Enforcement:	Inyo County Sheriff
Electricity:	Southern California Edison
Phone:	Verizon

Staff from the County Public Works Department was consulted with to see if there would be any infrastructure access or service easement issues if the road abandonment was completed. Public Works staff stated that there are no issues regarding the ability to continue to provide sanitary or other services if the Road Abandonment is approved. The AMWC is the applicant and they have stated that the area they are proposing for the well and well house has been analyzed for well construction and there are no access or easement issues regarding the property.

The Aspendell South Fork Volunteer Fire Department and the Inyo County Sheriff's department were also contacted by staff regarding potential access issues. Aspendell South Fork Volunteer Fire Department stated that the road abandonment will not have a negative effect on emergency service provision and the Sheriff's Department had no comments. Southern California Edison (electricity provider) and Verizon (phone service provider) offered no comments. Staff also sent a letter to the US Forest Service's Bishop office to see if there were issues regarding access to the property located to the south of the proposed abandonment that they manage. They offered no response.

Land Use Analysis: The property is bordered on the west by Cardinal Road and a small triangular piece of property owned by the County. This property and part of the area proposed for abandonment is currently used in the winter time to store snow from plowing. On the east and north is Columbine Drive and two residential properties, each with a single family home. To the south the area is predominantly vacant, open space, and is managed by the Forest Service. The proposed land division will not directly alter existing land use or permitted land uses from their current status. New development is not anticipated other than a well and well house for water service to Aspendell. Further out, the area has single family residential development and vacant open space. The area is close to recreation opportunities and is surrounded by mountains. This proposal is consistent with the rural, mountain community, character of the area as only a well and well house will be developed on the property.

Conveyance of Land: Concurrently with the abandonment, the applicant has requested that the property owners located to the east of the area of abandonment convey the part of the abandonment that defaults to them to the AMWC. This area will be used for a well and well house to provide potable water to the community of Aspendell. ICC Title 16 and the Subdivision Map Act (Government Code Section 66410 et seq.) regulate subdivisions. This conveyance is allowed per the County's Subdivision Ordinance 16.12.270 that includes the statement: . . . Any conveyance of land to a governmental agency, public entity or public utility shall not be considered a division of land for purposes of computing the number of parcels. As used in this section, "agricultural purposes" means the cultivation of food or fiber or the grazing or pasturing of livestock. The applicant will apply for a Parcel Merger once the Road Abandonment and Conveyance of property is complete.

Utilities and Public Services: No new utilities will be required on either of the parcels (the County parcel or the new parcels created by the conveyance, subsequent to the RA) as they will remain undeveloped, except for the well and well house, and adequate utilities are present for the well's operation.

ENVIRONMENTAL REVIEW

Pursuant to the California Environmental Quality Act (CEQA), the proposal is covered by the General Rule 15061(b) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The property that the well and well house will be built on is currently a dead paved road that is already disturbed.

Conditional Use Permit

Concurrently with the abandonment, the applicant has requested a CUP under 18.30.040(C) that allows for public/quasi-public uses. The AMWC's use of the parcel for a well to provide potable water to the community of Aspendell can be considered a public service use as the parcel will be used for the development of a well and well house. Specific findings are required for a Conditional Use Permit and staff has found that all of the findings can be made for CUP 2015-02/AMWC.

Findings

1. The proposed Conditional Use Permit is exempt under CEQA Guidelines by the General Rule 15061(b) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA and the provisions of the California Environmental Quality Act have been satisfied.
[Evidence: The property that the well and well house will be built on is currently a dead end section of a paved road that is already disturbed.]
2. The proposed Conditional Use Permit is consistent with the Inyo County General Plan Land Use designation of Residential Low Density (RL).
[Evidence: The goal of this project is to build a well and well house to provide potable water to the community of Aspendell. The General Plan designation of RL allows for public/quasi-public uses. Water service provision is considered a utility and utilities are considered a public service use; therefore, the well and well house for the provision of water service are consistent with policies and objectives under the County's General Plan and specifically to the RL designation.]
3. The proposed Conditional Use Permit is consistent with the Inyo County Zoning Ordinance, which permits "utility or public service facilities" as a conditional use in 18.30 the R1 district.
[Evidence: The use of the area will include the AMWC digging a well and building a well house to provide potable water to the community of Aspendell. This use is considered a utility/public service and the AMWC is requesting a conditional use permit satisfying the requirement of 18.30; and therefore, is consistent with 18.30 the R1 District.]
4. The proposed Conditional Use Permit is necessary or desirable.
[Evidence: Currently, the AMWC does not have optimal access to potable water and the current well's output is limited. AMWC's mission is to provide water service to the community of Aspendell. Approving this CUP will allow the AMWC to continue in this mission to provide potable water and have the flow levels necessary for adequate fire suppression; therefore, this CUP is both necessary and desirable.]
5. The proposed Conditional Use Permit is properly related to other uses and transportation and service facilities in the vicinity.

[Evidence: The proposed CUP will allow the AMWC to provide potable water and proper water flows for fire suppression. It will not change or increase the current level or type of uses in the community; and therefore, will have no negative impact on current transportation or service facilities in the vicinity. It will, however, have a positive impact on water and fire suppression services.]

6. The proposed Conditional Use Permit would not, under all the circumstances of this case, affect adversely the health or safety of persons living or working in the vicinity or be materially detrimental to the public welfare.

[Evidence: The proposed CUP will allow the AMWC to provide potable water and proper water flows for fire suppression. It will not change or increase the current level or type of use in the community; and therefore, will not create impacts on the health or safety of persons living or working in the vicinity or be materially detrimental to the public welfare. Conversely, it will improve the health and safety conditions in Aspendell by providing potable water and better water flow for improved fire suppression services.]

7. Operating requirements necessitate the Conditional Use Permit for the site.

[Evidence: Public/quasi-public uses require a conditional use permit per Inyo County Code Section 18.30.040(C) in the R1 District. Utilities (water service) are considered a public use.]

ENVIRONMENTAL REVIEW

Pursuant to the California Environmental Quality Act (CEQA), the proposal is covered by the General Rule 15061(b) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The property that the well and well house will be built on is currently a dead end, paved, road that is already disturbed.

Variance

Provision for Variances

Concurrently with the Road Abandonment and subsequent conveyance of land and CUP, the applicant is requesting a Variance to the building site and setback requirements. The Inyo County Zoning Ordinance states that any variance to the terms of the Zoning Ordinance may be granted if such a variance would “*not be contrary to its general intent or the public interest, where due to special conditions or exceptional characteristics of the property or its location or surroundings, a literal enforcement would result in practical difficulties or unnecessary hardships*” (Section 18.81.040).

Further, the Zoning Ordinance states that three Findings must be affirmed in order for any variance to be granted. In addition to the above Findings specified in the Inyo County Zoning Ordinance, California State Government Code requires four additional Findings for any variance. Affirmative variance Findings must describe the special circumstances that act to physically differentiate the project site from its neighbors and make it unique, and thus uniquely justified for a variance; alternatively, negative findings must describe

how the project's physical characteristics are not unique or exceptional, and therefore do not justify a variance. All seven of the Findings must be affirmed in order for a variance to be approved. Staff has reviewed this application and can find that all seven of the required Findings can be affirmed:

Findings

1. That there are exceptional circumstances applicable to the property involved, or to the intended use, which do not generally apply to other property in the same district.
[Evidence: The AMWC needs a new well site to provide potable water to the community of Aspendell. It currently has two wells, one can no longer be used due to high arsenic levels and the other has limited output capacity that is insufficient for fire suppression. The AMWC has investigated several sites in the Aspendell area and this is the only one with the potential to be conveyed to the water company and that also has appropriate access to an adequate water supply. The AMWC is requesting a variance to the required building area and setback requirements of 18.30 the R1 district as the lot that will be created from the conveyance do not support them. The other properties in the area are developed with single family homes and meet the development requirements of 18.30 the R1 district. They are also not being used for the development of water services; and therefore, the particular circumstances of the property in question do not apply to the other properties in the area or to the typical properties found in the County's R1 district.]
2. That the result would not be detrimental to the public welfare, or injurious to property in the vicinity.
[Evidence: Once the road abandonment is completed and the property is conveyed to the AMWC, they will construct a well and well house on it. It will be used to provide potable water to the community of Aspendell. The well and well house will not create a situation that can be considered detrimental or injurious to the public or other properties in the vicinity. The well and well house will be located on the edge of Aspendell; both will be low profile, and therefore, will not impact the visual quality of the community. Also, neither will contain dangerous materials or components that could be considered detrimental to the public welfare. In fact, the provision of safe potable water to the community as well as improved fire suppression capabilities could be better described as a benefit to the public welfare.]
3. That the strict application of the regulation sought to be modified would result in practical difficulties or hardships inconsistent with, and not necessary for the attainment of, the general purposes of this title.
[Evidence: The strict application of the required building area and setbacks in 18.30 the R1 district would effectively stop the development of a well and well house on the property. These structures are needed for the provision of potable water to the community of Aspendell. The applicant has researched other properties in the community, but none of the others meet all of the needs of the AMWC. Without this variance the applicant will experience practical difficulties and hardships that are inconsistent with 18.30 the R1 Zoning designation as it allows for the siting of utilities as conditional uses when operating requirements necessitate its location

within the district. The mission of the AMWC to provide potable water to the community of Aspendell and this Variance request is within the general purposes of 18.30 the R1 District as the siting of this well is necessary to the operating requirements of the AMWC. Not allowing the AMWC access to water at this site will create difficulties and hardships in the provision of water to the community of Aspendell.]

4. The proposed variance does not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which the property is situated.
[Evidence: The property for which the variance is requested is being created from a road abandonment and subsequent conveyance of land, and is strictly for the purpose of developing a well for the provision of potable water to the community of Aspendell. The other properties in the community are developed with single family homes, or are vacant and could have a single family home built on them. The property owners in Aspendell could apply for conditional use permits, as allowed for by 18.30 and variances if their lot configurations required it for potential well development. This particular property is being conveyed to the AMWC specifically for water provision. It is not large enough for single family home development. Overall, the small size severely limits the potential use of this parcel, especially in light of the R1 district and the R1 District allows for the siting of utilities as conditional uses when operating requirements necessitate its location within the district. Therefore, this is not a grant of special privileges with regard to the other properties in the vicinity, or within 18.30 the R1 District.]
5. The proposed variance does not authorize a use or activity that is not otherwise expressly authorized by the zoning regulation governing the parcel of property.
[Evidence: 18.30 the R1 District allows, as a conditional use, the siting of utilities when the operating requirements necessitate its location within the district. The AMWC operations do require that the well and well house be sited in Aspendell and within the R1 District as that is where the necessary water source is found and the property can be procured; therefore, this variance would not authorize a use or activity that is not allowed in 18.30.]
6. The proposed variance is consistent with the General Plan.
[Evidence: The proposed variance will be on property with a General Plan designation of Residential Low Density (RL). This designation provides for single-family residential neighborhoods adjacent to existing communities or rural residential communities, public and quasi-public uses, and similar and compatible uses. The proposed well and well house will be used to provide potable water to the community of Aspendell. Public utility services are considered public uses; and therefore, this variance is consistent with the General Plan and more specifically the RL district.]
7. The requirements of the California Environmental Quality Act have been met.
[Evidence: Pursuant to the California Environmental Quality Act (CEQA), the proposed variance is covered by the General Rule 15061(b) that CEQA applies only

to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The property that the well and well house will be built on is currently a dead end paved road that is already disturbed.]

RECOMMENDATIONS – Road Abandonment

Staff recommends the Planning Commission adopt the attached resolution addressing the road abandonment, to be transmitted to the Board of Supervisors, with the following findings and conditions of approval;

Recommended Findings:

1. Based on substantial evidence in the record, proposed Road Abandonment No. 2015-01/AMWC is consistent with the Goals and Policies of the Inyo County General Plan.
2. Proposed Road Abandonment No. 2015-01/AMWC exempt from the requirements of the California Environmental Quality under Section 15061(b)(3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment.

RECOMMENDATIONS – CUP and Variance

1. Based on substantial evidence in the record, proposed CUP 2015-02/AMWC and Variance 2015-01/AMWC are consistent with the Goals and Policies of the Inyo County General Plan and there is sufficient evidence to support the necessary findings for approval.
2. Proposed CUP 2015-02/AMWC; and Variance 2015-01/AMWC are exempt from the requirements of the California Environmental Quality under Section 15061(b)(3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the property that the well and well house will be built on is currently a dead end, paved, road that is already disturbed.

Recommended Conditions of Approval:

1. Hold Harmless: the applicant, landowner, and/or operator shall defend, indemnify and hold harmless Inyo County, its agents, officers and employees from any claim, action, or proceeding against the County, its advisory agencies, appeal boards, or its legislative body concerning proposed Road Abandonment No. 2015-01/AMWC; CUP 2015-02/AMWC; and Variance 2015-01/AMWC.
2. The Conveyance of land to the AMWC from the properties owners of APN 014-294-07 and APN 014-294-08, located to the east of the abandonment is completed prior to the issuance of a building permit.

3. A Parcel Merger is completed on the two parcels that will be created from the Road Abandonment and subsequent conveyance to the AMWC by the property owners prior to the issuance of a building permit.

Attachments:

- 1) Exhibit A, Legal Description; Exhibit B, Map, & Vicinity Map
- 2) Consent to Road Abandonment
- 3) Planning Commission Resolution No. 2015-

Attachment 5: Planning Commission Resolution No. 2015-01

RESOLUTION NO. 2015-01

A RESOLUTION OF THE PLANNING COMMISSION OF THE COUNTY OF INYO, STATE OF CALIFORNIA, FINDING THAT PROPOSED ROAD ABANDONMENT #2015-01 ASPENDELL MUTUAL WATER COMPANY IS IN CONFORMANCE WITH THE INYO COUNTY GENERAL PLAN AND IS EXEMPT FROM THE REQUIREMENTS OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT UNDER SECTION 15061(B) AND APPROVE ROAD ABANDONMENT 2015-01/ASPENDELL MUTUAL WATER COMPANY, SUBJECT TO CERTAIN CONDITIONS

WHEREAS, on April 23, 2015, the County of Inyo received an application to abandon a County right-of-way described as: A portion of the State of California, located in an unincorporated area of the County of Inyo, lying within the NE ¼ of the SW ¼ of Section 20, Township 8 South, Range 31 East, Mount Diablo Baseline and Meridian. Said Northeast ¼ of Section 20 also being located within the Aspendell Subdivision Tract No. 1 as recorded in Book 2 of Maps, Page 28, of Inyo County Official Records. Said portion being a forty foot wide strip of land . . . ; and

WHEREAS, such an abandonment may be conducted pursuant to Chapter 3 of Part 3 of Division 9, commencing with Section 8320, of the Streets and Highways Code; and

WHEREAS, Government Code Section 65402 requires a proposed street abandonment to first be reviewed by the Planning Commission for a determination as to the proposal's conformance with the County General Plan; and

WHEREAS, the Planning Commission has found that the proposed road abandonment is consistent and in conformance with the Inyo County General Plan; and

WHEREAS, in accordance with the conditions necessary to identify viable candidates for street abandonment, the Planning Commission has determined the subject streets are not the sole route of access for any property in the vicinity and that the abandonment of said roadways will not cut off required access to contiguous properties; and

WHEREAS, the Inyo County Planning Department prepared a finding that Road Abandonment #2015-01/Aspendell Mutual Water Company is Exempt from the requirements of the California Environmental Quality Act (CEQA) under Section 15061(b) of the CEQA guidelines since there is no possibility that the activity in question would have a significant effect on the environment; and

WHEREAS, the Inyo County Planning Commission held a public hearing on September 23, 2015, to review and consider a request for the approval of Road

Abandonment 2015-01/Aspendell Mutual Water Company, and considered the staff report for the application and all oral and written comments regarding the application.

NOW, THEREFORE, BE IT RESOLVED, that, based on all of the written and oral comment and input received at the September 23, 2015, hearing, including the Planning Department Staff Report with the CEQA Exemption finding, concerning the above described proposed project, this Planning Commission finds Road Abandonment 2015-01/Aspendell Mutual Water Company to be in conformance with the Inyo County General Plan and the California Environmental Quality Act; and

BE IT FURTHER RESOLVED, that the Planning Commission makes, and recommends that the Board of Supervisors adopt, the following Conditions of Approval for the proposed project:

RECOMMENDED CONDITIONS OF APPROVAL:

1. Hold Harmless: the applicant, landowner, and/or operator shall defend, indemnify and hold harmless Inyo County, its agents, officers and employees from any claim, action, or proceeding against the County, its advisory agencies, appeal boards, or its legislative body concerning Road Abandonment #2015-01/Aspendell Mutual Water Company.
2. A Conveyance of land to the Aspendell Mutual Water Company from the properties owners of APN 014-294-07 and APN 014-294-08, located to the east of the abandonment is completed prior to the issuance of a building permit.
3. A Parcel Merger is completed on the two parcels that will be created from the Road Abandonment and subsequent conveyance to the Aspendell Mutual Water Company by the property owners prior to the issuance of a building permit; and

BE IT FURTHER RESOLVED, that the Planning Commission recommends that the Board of Supervisors:

1. Approve Road Abandonment #2015-01/Aspendell Mutual Water Company based on all of the information in the public record and on recommendation of the Planning Commission.

Passed and adopted this 23 day of September, 2015.

AYES: Corner, Stewart, Switzer

NOES: 0

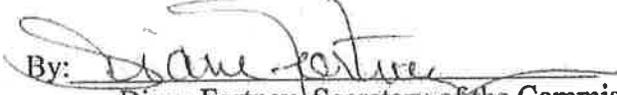
ABSTAIN: 0

ABSENT: Wahrenbrock, Gentry



Ross Corner, Vice Chairperson
Inyo County Planning Commission

ATTEST: Joshua Hart, AICP, Planning Director

By: 

Diane Fortney, Secretary of the Commission

Attachment 6: Planning Commission Staff Report



Planning Department
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AGENDA ITEM NO.: 5 (Action Item – Public Hearing)

PLANNING COMMISSION MEETING DATE: September 23, 2015

SUBJECT: Road Abandonment No. 2015-01/Aspendell Mutual Water Company (AMWC); Conditional Use Permit (CUP) 2015-02/AMWC; Variance 2015-01/AMWC.

EXECUTIVE SUMMARY

The applicant is requesting a road abandonment of an approximate 5,000-sqft section of an unnamed road located in the community of Aspendell, CA, approximately 17-miles southwest of the City of Bishop CA, between tax assessor parcels (APN) APN 014-294-09 (west); and, APN 014-294-07 and APN 014-294-08 (east). The site is currently vacant and the County road department stores snow from plowing on it in the winter. The portion of street proposed to be abandoned dead-ends at the north end of a large vacant parcel under the management of the US Forest Service (APN 014-030-12). To the North is Cardinal Road and residential development. The property directly to the west of the proposed abandonment is currently owned by the County and is used for snow storage in the winter. To the east the area proposed to be abandoned is bordered by two residential lots APN 014-294-07 and APN 014-294-08 (Attachment 1 map, legal description, and vicinity map). The area proposed to be abandoned will be bisected northwest to southeast; the west half will go to the County property located on the west and the other half will go to the two residential properties located on the east (Attachment 2, parcel configurations after abandonment).

The Public Streets, Highways, and Service Easements Vacation Law, set forth in Section 8300 et seq. of the California Street and Highway Code, allows a County Board of Supervisors to abandon a road under its jurisdiction upon making certain findings following a public hearing. Section 8313 of the Abandonment Law and Section 65402 of the Government Code, states that before the Board of Supervisors may order such abandonment, the County Planning Commission must review the proposed abandonment and find it is in conformance with the County's General Plan and adopt a resolution of their findings.

Concurrently with the abandonment, the applicant has requested that the property owners of the parcels located to the east of the area of abandonment convey the part of the abandonment that goes to APN 014-294-07 and APN 014-294-08 to the AMWC, and thereby create two new parcels. These parcels will be used for a well and well house to provide potable water to the community of Aspendell. This conveyance is allowed per the County's Subdivision Ordinance 16.12.270 that includes the statement: . . . Any conveyance of land to a governmental agency, public entity or public utility shall not be considered a division of land for purposes of computing the number of parcels. As used in this section, "agricultural purposes" means the cultivation of food or fiber or the grazing or pasturing of livestock.

Each half of the road abandonment area will automatically take on the General Plan and zoning designations of the parcels they are dissolved into. The zoning designations will be One-Family Residential with a 10,000-square-foot minimum (R1-10,000); and the General Plan will be Residential Low Density (RL). The R1 Zoning District allows for public/quasi-public uses as a conditional use, under 18.30.040 (C): utility, or public service facility, when operating requirements necessitate its location within the district, but not including a storage garage, machine shop or corporation yard. This location is necessary for the AMWC to provide potable water to the community as one of the two current wells is too high in arsenic and can no longer be used and the other does not have adequate output for fire protection services. This site is unique in that it can be obtained by the AMWC and has access to an adequate supply of potable water. The RL General Plan designation also allows for public/quasi-public uses. The applicant is requesting a Conditional Use Permit to put a well and well house on the property after it is abandoned and conveyed to the AMWC and a Variance to the required building site and setback requirements as the parcel will be too small to meet these standards.

PROJECT INFORMATION

Supervisory District:	1
Applicants:	Aspendell Mutual Water Company
Landowner:	Inyo County
Address:	All that portion of an unnamed road lying west of Cardinal Road as shown on Subdivision Book 2, page 28, in the community of Aspendell, CA, approximately 17-miles southwest of Bishop, CA.
Community:	Aspendell, CA
A.P.N.s:	N/A
General Plan:	N/A

Zoning: N/A

Size of Parcel(s): Section of road to be abandoned is approximately 5,000-sqft.

Surrounding Land Use:

Location:	Use:	Gen. Plan Designation	Zoning
Site	Vacant, used by County road department for winter snow storage	N/A	N/A
North	Cardinal Road, residential development	Residential Low Density (RL)	Residential One Family, 10,000sqft. minimum (R1-10,000)
East	Residential development	Residential Low Density (RL)	Residential One Family, 10,000sqft. minimum (R1-10,000)
South	Vacant/Open Space	State and Federal Land (SFL)	Open Space 40-acre minimum (OS-40)
West	Residential development.	Residential Low Density (RL)	Residential One Family, 10,000sqft. minimum (R1-10,000)

Recommended Action(s):

1) Conduct a public hearing and find that the proposed road abandonment RA 2015-01/AMWC is consistent with the Inyo County General Plan; and, find that RA 2015-01/AMWC is exempt from the requirements of the California Environmental Quality under Section 15061(b) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the roadway is pre-existing and is a paved dead-end street that is already disturbed; and, recommend the Board of Supervisors adopt the attached resolution approving the proposed abandonment.

2) Conduct a public hearing and conditionally approve CUP 2015-02/AMWC; and, find that CUP 2015-02/AMWC is exempt from the requirements of the California Environmental

Quality under Section 15061(b) (3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the roadway is pre-existing and is a paved dead-end street that is already disturbed.

3) Conduct a public hearing and conditionally approve Variance 2015-01/AMWC; and, find that Variance 2015-01/AMWC is exempt from the requirements of the California Environmental Quality under Section 15061(b) (3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the roadway is pre-existing and is a paved dead-end street that is already disturbed.

Alternatives:

1) Do not make a recommendation to the Board of Supervisors to approve the proposed road abandonment, and do not approve the Conditional Use Permit, or Variance thereby effectively recommending denial of these actions

2) Continue the public hearing to a future date, and provide specific direction to staff regarding additional information and analysis needed.

Project Planner:

Cathreen Richards

PROJECT DESCRIPTION

The applicant is requesting a road abandonment of an approximate 5,000-sqft section of Columbine Drive located in the community of Aspendell, approximately 17-miles from the City of Bishop, CA, between tax assessor parcels (APN) APN 014-294-09 (west); and, APN 014-294-07 and APN 014-294-08 (east). The site is currently vacant and the County road department stores snow from road plowing on it in the winter. The applicant has indicated that the eastern portion of the abandonment will be used for a well and well house for the provision of potable water to the community of Aspendell. There are three adjacent property owners. The two owners on the east side have given their written consent for the proposed road abandonment (Attachment 2). The County owns the property on the west and the County Public Works/Road Department has indicated that

they wish to keep the area of abandonment on the west side for the continued use of winter snow storage, but otherwise have not objections to the abandonment.

STAFF ANALYSIS

Road Abandonment

Site Description

The Aspendell subdivision final map was approved by the Inyo County Board of Supervisors on July 16, 1962. The original recorded subdivision map illustrates the dead-end section of an unnamed road, originating at the western edge of Cardinal Road and terminating at the northern edge of APN # 014-030-12 a large vacant parcel under the management of the US Forest Service. Because of the locational characteristics, this dead-end piece of road does not provide primary access to any of the parcels abutting it. The parcel located directly to the south APN #014-030-12 can be accessed by this dead end road, but it is also bordered by Highway-168 on its east side and can be accessed from Highway-168. It can also be accessed by Cardinal Road on the west. The two residential lots located directly east of the area proposed to be abandoned are accessed by Columbine Drive. Their back yards are adjacent to the area proposed to be abandoned but do not use it for access (Attachment 1, site map).

General Plan Consistency

Pursuant to Section 65402 of the Government Code, the vacation or abandonment of a road by a public agency must be reviewed by the planning agency for consistency with the general plan. The Planning Commission must make a determination that the proposed action is consistent with the general plan. While there are no specific General Plan policies within the Inyo County General Plan that apply directly to the vacation or abandonment of a roadway, there are policies within the General Plan relevant to the proposed action. The policies applicable to this project include:

Policy LU-2.14 - Access: The County shall require that adequate vehicle access is provided to all neighborhoods and developments consistent with the intensity of residential development.

Discussion: The portion of the road proposed to be abandoned currently dead-ends at the northern property line of a single parcel of land that is managed by the Forest Service. This parcel is vacant and can be accessed from Cardinal Road on the west and State Highway 168 on the east. The two residential properties located to the east of the proposed abandonment use Columbine Drive for access and the owners have given the applicant permission to pursue the abandonment (Attachment 2).

Policy LU-2.4: Residential Low Density (RL): This designation provides for single-family residential neighborhoods adjacent to existing communities or rural residential communities, public and quasi-public uses, and similar and compatible uses.

Discussion: The future use of the area proposed to be abandoned will include the continuation of the County road department storing plowed snow in the winter; and, the AMWC digging a well to provide potable water to the community of Aspendell. The RL General Plan designation allows for public, quasi-public uses and both of these proposed uses are considered public/quasi-public.

Zoning Ordinance Consistency

Chapter 18.30.040 Conditional Uses (C): *Utility, or public service facility, when operating requirements necessitate its location within the district, but not including a storage garage, machine shop or corporation yard*

Discussion: The future use of the area proposed to be abandoned will include the continuation of the County road department storing plowed snow in the winter and, the AMWC digging a well to provide potable water to the community of Aspendell. Both of these uses are considered public uses and the AMWC is requesting a conditional use permit for a well and well house to provide water to the community of Aspendell that is in compliance with 18.30.040(C). The new parcels will not meet the development standards of the R1-10,000 zoning district; and, therefore the applicant is also asking for a Variance on the building site and setback requirements.

Access/Traffic

The portion of the road proposed to be abandoned is a dead-end street that terminates at the northern property line of the parcel located directly to the south. This and the residential properties located on the east could be accessed by this dead end section of road. The access from this dead end road is not used by any of the adjacent properties, nor is it necessary for the provision of access; therefore, there will be no loss of access to the properties if the road abandonment is completed. The parcel on the south can be accessed by Highway-168 and by Cardinal Road. The two residential lots located directly east of the area proposed to be abandoned are accessed by Columbine Drive. Their back yards are adjacent to the area proposed to be abandoned, but do not use it for access.

Public Services

Sewer:	CSA 2, Inyo County
Water:	Aspendell Mutual Water Company
Fire:	Aspendell South Fork Volunteer Fire Department
Law Enforcement:	Inyo County Sheriff
Electricity:	Southern California Edison
Phone:	Verizon

Staff from the County Public Works Department was consulted with to see if there would be any infrastructure access or service easement issues if the road abandonment was completed. Public Works staff stated that there are no issues regarding the ability to continue to provide sanitary or other services if the Road Abandonment is approved. The AMWC is the applicant and they have stated that the area they are proposing for the well and well house has been analyzed for well construction and there are no access or easement issues regarding the property.

The Aspendell South Fork Volunteer Fire Department and the Inyo County Sheriff's department were also contacted by staff regarding potential access issues. Aspendell South Fork Volunteer Fire Department stated that the road abandonment will not have a negative effect on emergency service provision and the Sheriff's Department had no comments. Southern California Edison (electricity provider) and Verizon (phone service provider) offered no comments. Staff also sent a letter to the US Forest Service's Bishop office to see if there were issues regarding access to the property located to the south of the proposed abandonment that they manage. They offered no response.

Land Use Analysis: The property is bordered on the west by Cardinal Road and a small triangular piece of property owned by the County. This property and part of the area proposed for abandonment is currently used in the winter time to store snow from plowing. On the east and north is Columbine Drive and two residential properties, each with a single family home. To the south the area is predominantly vacant, open space, and is managed by the Forest Service. The proposed land division will not directly alter existing land use or permitted land uses from their current status. New development is not anticipated other than a well and well house for water service to Aspendell. Further out, the area has single family residential development and vacant open space. The area is close to recreation opportunities and is surrounded by mountains. This proposal is consistent with the rural, mountain community, character of the area as only a well and well house will be developed on the property.

Conveyance of Land: Concurrently with the abandonment, the applicant has requested that the property owners located to the east of the area of abandonment convey the part of the abandonment that defaults to them to the AMWC. This area will be used for a well and well house to provide potable water to the community of Aspendell. ICC Title 16 and the Subdivision Map Act (Government Code Section 66410 et seq.) regulate subdivisions. This conveyance is allowed per the County's Subdivision Ordinance 16.12.270 that includes the statement: . . . Any conveyance of land to a governmental agency, public entity or public utility shall not be considered a division of land for purposes of computing the number of parcels. As used in this section, "agricultural purposes" means the cultivation of food or fiber or the grazing or pasturing of livestock. The applicant will apply for a Parcel Merger once the Road Abandonment and Conveyance of property is complete.

Utilities and Public Services: No new utilities will be required on either of the parcels (the County parcel or the new parcels created by the conveyance, subsequent to the RA) as they will remain undeveloped, except for the well and well house, and adequate utilities are present for the well's operation.

ENVIRONMENTAL REVIEW

Pursuant to the California Environmental Quality Act (CEQA), the proposal is covered by the General Rule 15061(b) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The property that the well and well house will be built on is currently a dead paved road that is already disturbed.

Conditional Use Permit

Concurrently with the abandonment, the applicant has requested a CUP under 18.30.040(C) that allows for public/quasi-public uses. The AMWC's use of the parcel for a well to provide potable water to the community of Aspendell can be considered a public service use as the parcel will be used for the development of a well and well house. Specific findings are required for a Conditional Use Permit and staff has found that all of the findings can be made for CUP 2015-02/AMWC.

Findings

1. The proposed Conditional Use Permit is exempt under CEQA Guidelines by the General Rule 15061(b) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA and the provisions of the California Environmental Quality Act have been satisfied.
[Evidence: The property that the well and well house will be built on is currently a dead end section of a paved road that is already disturbed.]
2. The proposed Conditional Use Permit is consistent with the Inyo County General Plan Land Use designation of Residential Low Density (RL).
[Evidence: The goal of this project is to build a well and well house to provide potable water to the community of Aspendell. The General Plan designation of RL allows for public/quasi-public uses. Water service provision is considered a utility and utilities are considered a public service use; therefore, the well and well house for the provision of water service are consistent with policies and objectives under the County's General Plan and specifically to the RL designation.]
3. The proposed Conditional Use Permit is consistent with the Inyo County Zoning Ordinance, which permits "utility or public service facilities" as a conditional use in 18.30 the R1 district.
[Evidence: The use of the area will include the AMWC digging a well and building a well house to provide potable water to the community of Aspendell. This use is considered a utility/public service and the AMWC is requesting a conditional use permit satisfying the requirement of 18.30; and therefore, is consistent with 18.30 the R1 District.]
4. The proposed Conditional Use Permit is necessary or desirable.
[Evidence: Currently, the AMWC does not have optimal access to potable water and the current well's output is limited. AMWC's mission is to provide water service to the community of Aspendell. Approving this CUP will allow the AMWC to continue in this mission to provide potable water and have the flow levels necessary for adequate fire suppression; therefore, this CUP is both necessary and desirable.]
5. The proposed Conditional Use Permit is properly related to other uses and transportation and service facilities in the vicinity.

[Evidence: The proposed CUP will allow the AMWC to provide potable water and proper water flows for fire suppression. It will not change or increase the current level or type of uses in the community; and therefore, will have no negative impact on current transportation or service facilities in the vicinity. It will, however, have a positive impact on water and fire suppression services.]

6. The proposed Conditional Use Permit would not, under all the circumstances of this case, affect adversely the health or safety of persons living or working in the vicinity or be materially detrimental to the public welfare.

[Evidence: The proposed CUP will allow the AMWC to provide potable water and proper water flows for fire suppression. It will not change or increase the current level or type of use in the community; and therefore, will not create impacts on the health or safety of persons living or working in the vicinity or be materially detrimental to the public welfare. Conversely, it will improve the health and safety conditions in Aspendell by providing potable water and better water flow for improved fire suppression services.]

7. Operating requirements necessitate the Conditional Use Permit for the site.

[Evidence: Public/quasi-public uses require a conditional use permit per Inyo County Code Section 18.30.040(C) in the R1 District. Utilities (water service) are considered a public use.]

ENVIRONMENTAL REVIEW

Pursuant to the California Environmental Quality Act (CEQA), the proposal is covered by the General Rule 15061(b) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The property that the well and well house will be built on is currently a dead end, paved, road that is already disturbed.

Variance

Provision for Variances

Concurrently with the Road Abandonment and subsequent conveyance of land and CUP, the applicant is requesting a Variance to the building site and setback requirements. The Inyo County Zoning Ordinance states that any variance to the terms of the Zoning Ordinance may be granted if such a variance would “*not be contrary to its general intent or the public interest, where due to special conditions or exceptional characteristics of the property or its location or surroundings, a literal enforcement would result in practical difficulties or unnecessary hardships*” (Section 18.81.040).

Further, the Zoning Ordinance states that three Findings must be affirmed in order for any variance to be granted. In addition to the above Findings specified in the Inyo County Zoning Ordinance, California State Government Code requires four additional Findings for any variance. Affirmative variance Findings must describe the special circumstances that act to physically differentiate the project site from its neighbors and make it unique, and thus uniquely justified for a variance; alternatively, negative findings must describe

how the project's physical characteristics are not unique or exceptional, and therefore do not justify a variance. All seven of the Findings must be affirmed in order for a variance to be approved. Staff has reviewed this application and can find that all seven of the required Findings can be affirmed:

Findings

1. That there are exceptional circumstances applicable to the property involved, or to the intended use, which do not generally apply to other property in the same district.

[Evidence: The AMWC needs a new well site to provide potable water to the community of Aspendell. It currently has two wells, one can no longer be used due to high arsenic levels and the other has limited output capacity that is insufficient for fire suppression. The AMWC has investigated several sites in the Aspendell area and this is the only one with the potential to be conveyed to the water company and that also has appropriate access to an adequate water supply. The AMWC is requesting a variance to the required building area and setback requirements of 18.30 the R1 district as the lot that will be created from the conveyance do not support them. The other properties in the area are developed with single family homes and meet the development requirements of 18.30 the R1 district. They are also not being used for the development of water services; and therefore, the particular circumstances of the property in question do not apply to the other properties in the area or to the typical properties found in the County's R1 district.]

2. That the result would not be detrimental to the public welfare, or injurious to property in the vicinity.

[Evidence: Once the road abandonment is completed and the property is conveyed to the AMWC, they will construct a well and well house on it. It will be used to provide potable water to the community of Aspendell. The well and well house will not create a situation that can be considered detrimental or injurious to the public or other properties in the vicinity. The well and well house will be located on the edge of Aspendell; both will be low profile, and therefore, will not impact the visual quality of the community. Also, neither will contain dangerous materials or components that could be considered detrimental to the public welfare. In fact, the provision of safe potable water to the community as well as improved fire suppression capabilities could be better described as a benefit to the public welfare.]

3. That the strict application of the regulation sought to be modified would result in practical difficulties or hardships inconsistent with, and not necessary for the attainment of, the general purposes of this title.

[Evidence: The strict application of the required building area and setbacks in 18.30 the R1 district would effectively stop the development of a well and well house on the property. These structures are needed for the provision of potable water to the community of Aspendell. The applicant has researched other properties in the community, but none of the others meet all of the needs of the AMWC. Without this variance the applicant will experience practical difficulties and hardships that are inconsistent with 18.30 the R1 Zoning designation as it allows for the siting of utilities as conditional uses when operating requirements necessitate its location

within the district. The mission of the AMWC to provide potable water to the community of Aspendell and this Variance request is within the general purposes of 18.30 the R1 District as the siting of this well is necessary to the operating requirements of the AMWC. Not allowing the AMWC access to water at this site will create difficulties and hardships in the provision of water to the community of Aspendell.]

4. The proposed variance does not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which the property is situated.
[Evidence: The property for which the variance is requested is being created from a road abandonment and subsequent conveyance of land, and is strictly for the purpose of developing a well for the provision of potable water to the community of Aspendell. The other properties in the community are developed with single family homes, or are vacant and could have a single family home built on them. The property owners in Aspendell could apply for conditional use permits, as allowed for by 18.30 and variances if their lot configurations required it for potential well development. This particular property is being conveyed to the AMWC specifically for water provision. It is not large enough for single family home development. Overall, the small size severely limits the potential use of this parcel, especially in light of the R1 district and the R1 District allows for the siting of utilities as conditional uses when operating requirements necessitate its location within the district. Therefore, this is not a grant of special privileges with regard to the other properties in the vicinity, or within 18.30 the R1 District.]
5. The proposed variance does not authorize a use or activity that is not otherwise expressly authorized by the zoning regulation governing the parcel of property.
[Evidence: 18.30 the R1 District allows, as a conditional use, the siting of utilities when the operating requirements necessitate its location within the district. The AMWC operations do require that the well and well house be sited in Aspendell and within the R1 District as that is where the necessary water source is found and the property can be procured; therefore, this variance would not authorize a use or activity that is not allowed in 18.30.]
6. The proposed variance is consistent with the General Plan.
[Evidence: The proposed variance will be on property with a General Plan designation of Residential Low Density (RL). This designation provides for single-family residential neighborhoods adjacent to existing communities or rural residential communities, public and quasi-public uses, and similar and compatible uses. The proposed well and well house will be used to provide potable water to the community of Aspendell. Public utility services are considered public uses; and therefore, this variance is consistent with the General Plan and more specifically the RL district.]
7. The requirements of the California Environmental Quality Act have been met.
[Evidence: Pursuant to the California Environmental Quality Act (CEQA), the proposed variance is covered by the General Rule 15061(b) that CEQA applies only

to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The property that the well and well house will be built on is currently a dead end paved road that is already disturbed.]

RECOMMENDATIONS – Road Abandonment

Staff recommends the Planning Commission adopt the attached resolution addressing the road abandonment, to be transmitted to the Board of Supervisors, with the following findings and conditions of approval;

Recommended Findings:

1. Based on substantial evidence in the record, proposed Road Abandonment No. 2015-01/AMWC is consistent with the Goals and Policies of the Inyo County General Plan.
2. Proposed Road Abandonment No. 2015-01/AMWC exempt from the requirements of the California Environmental Quality under Section 15061(b)(3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment.

RECOMMENDATIONS – CUP and Variance

1. Based on substantial evidence in the record, proposed CUP 2015-02/AMWC and Variance 2015-01/AMWC are consistent with the Goals and Policies of the Inyo County General Plan and there is sufficient evidence to support the necessary findings for approval.
2. Proposed CUP 2015-02/AMWC; and Variance 2015-01/AMWC are exempt from the requirements of the California Environmental Quality under Section 15061(b)(3) of the California Environmental Quality Act (CEQA) guidelines since there is no possibility that the activity in question would have a significant effect on the environment as the property that the well and well house will be built on is currently a dead end, paved, road that is already disturbed.

Recommended Conditions of Approval:

1. Hold Harmless: the applicant, landowner, and/or operator shall defend, indemnify and hold harmless Inyo County, its agents, officers and employees from any claim, action, or proceeding against the County, its advisory agencies, appeal boards, or its legislative body concerning proposed Road Abandonment No. 2015-01/AMWC; CUP 2015-02/AMWC; and Variance 2015-01/AMWC.
2. The Conveyance of land to the AMWC from the properties owners of APN 014-294-07 and APN 014-294-08, located to the east of the abandonment is completed prior to the issuance of a building permit.

3. A Parcel Merger is completed on the two parcels that will be created from the Road Abandonment and subsequent conveyance to the AMWC by the property owners prior to the issuance of a building permit.

Attachments:

- 1) Exhibit A, Legal Description; Exhibit B, Map, & Vicinity Map
- 2) Consent to Road Abandonment
- 3) Planning Commission Resolution No. 2015-