GRANT OF NON-EXCLUSIVE EASEMENT

CLARK COUNTY WATER RECLAMATION DISTRICT, formerly known as CLARK COUNTY SANITATION DISTRICT, prior to January 6, 2003, a political subdivision of the State of Nevada, hereinafter referred to as GRANTOR or DISTRICT, for and in consideration of One Dollar ($1.00) to them in hand paid, receipt of which is hereby acknowledged do hereby grant and convey unto the CLEAN WATER COALITION, a political subdivision of the State of Nevada, hereinafter referred to as the GRANTEE or CLEAN WATER COALITION, and its successors and assigns, a permanent non-exclusive easement ("Permanent Easement") including the right to enter upon the property herein described in Exhibits A through A2 and only for the purpose of trenching, laying, constructing, inspection, maintaining and repairing, reconstruction, operation and removal of one ten-foot (10') diameter effluent conveyance pipeline and appurtenant underground structures, including, combination AV/AR valve assembly and manway with access structure, conduits, wires and cables for power and communication, control systems connections, underground anodes, communication lines, and anode wells and related facilities for cathodic protection of pipelines (collectively, the "Improvements") for Grantee's use only. Said pipeline to be used only for the conveyance of wastewater under the real property situated in the Advance Wastewater Treatment Facility, County of Clark, State of Nevada, bounded and described as follows:

(see legal description and sketches Exhibit A1 and A2 attached hereto and reference made a part hereof.)

Additionally, Grantor does hereby grant to Grantee, a non-exclusive temporary construction easement "(Temporary Easement") across the parcels of land described in Exhibits B1 and B2. attached hereto and by this reference incorporated herein. The duration of the Temporary Easement shall extend to the completion of construction of the improvements, but shall not extend past December 31, 2013.

The Permanent Easement and Temporary Easement are hereinafter referred to jointly as "Easements" or "Easement Property".

Grantor reserves all other rights in the Easement Property, including but not limited to the right to use the Easement Property for any purpose beneficial to Grantor as solely determined by the Grantor.

This grant of Easement is subject to the following conditions:

1. Grantor shall utilize the Permanent Easement only for the purpose of trenching, laying, inspection, operation, construction, maintenance, repair, reconstruction, removal, and replacement of pipeline for conveying effluent. All construction, operation, maintenance, repair, reconstruction, removal, and replacement shall be done at no cost or expense to the Grantor and only with the consent of the Grantor, which consent shall not be unreasonably withheld in compliance with all applicable codes and rules and to the reasonable satisfaction of the Grantor and in a manner such as to pose no undue inconvenience to the Grantor and the public.

2. Prior to any construction, maintenance, repair, reconstruction, and/or removal of the Grantee's Improvements or other related activities in the Easements, Grantee, at its sole cost and expense, shall submit the design of the Improvements to the Grantor for the Grantor's prior written approval. All work performed on the Permanent Easement in connection with the construction, maintenance, repair, renewal, modification or reconstruction of the Improvements shall be done to the satisfaction of the Grantor and in conformance to the plans and specifications that have been approved in writing by the Grantor. Grantee agrees to comply with any conditions required by the Grantor. Grantee shall at its sole cost and expense obtain all necessary permits.
The Grantee, at its sole expense, shall operate, maintain and use the Improvements in a good and safe condition and shall keep the Improvements free and clear of debris, sediment or obstructive matter which may or could interfere with or impede the proper functioning of the Improvements.

3. If an emergency should arise requiring immediate attention, the Grantee shall provide as much notice as practicable to the Grantor before commencing any work. In all other situations, the Grantee shall notify the Grantor at least ten (10) days (or such lesser time as the Grantor may allow) in advance of the repair, renewal, modification, reconstruction, relocation or removal of the Improvements. All such work shall be prosecuted diligently to completion.

4. The Grantee shall bear the entire cost and expense incurred in connection with the construction, maintenance, repair and renewal and any and all modification, revision, relocation, removal or reconstruction of the Improvements.

5. All the terms, conditions and stipulations herein expressed with reference to the Improvements within the Permanent Easement in the location hereinbefore described shall, so far as the Improvements remain on the Permanent Easement, apply to the Improvements as modified or changed.

6. Grantee agrees not to remove, restrict, alter, disrupt, damage and/or interfere with any facility, utility and/or improvement located within the Easements unless otherwise agreed to separately in writing by the Owner of the facility, utility and or improvement. If Grantor allows Grantee to remove, restrict, alter, disrupt, damage, and/or interfere with any facility, utility and/or improvement, Grantee shall at its sole cost and expense perform whatever action is required by Grantor, including but not limited to repairing and/or reconstructing the facility, utility and/or improvement to the satisfaction of the Grantor.

7. Grantee shall pay, at its sole cost and expense, all costs of any utility relocations, alterations, modifications, adjustments, or reconstruction necessitated by the Grantee’s Improvements contemplated within the Easements. Grantee further agrees that upon written request from the Grantor, it will at Grantee’s sole cost and expense relocate, modify, adjust and/or remove any of Grantee’s Improvements located within twenty-five (25) feet from the ground surface to another area within the Easement in order to accommodate a District project within the time prescribed by the Grantor, not to exceed One Hundred Eighty (180) days.

8. The effluent conveyance pipeline shall have a minimum depth of cover of six feet (6’) defined as the vertical distance between the surface and the top of the encasement of the effluent conveyance pipeline.

9. Grantee agrees that throughout the duration of the Easements, at its sole cost and expense, it will be responsible for the compliance with local, state and federal laws including but not limited to County Air Quality Regulations. Grantee shall also throughout the duration of the construction on the District easements, at its sole cost and expense, be responsible for all required dust mitigation.

10. Grantee agrees that in accomplishing the work it will use every practical effort to not disturb the Easement Property or any other District property and Grantee further agrees to remove any trash or debris caused by Grantee’s negligence present upon the Easement Property within ninety (90) days following any activity of Grantee including but not limited to the completion of construction and/or maintenance of Grantee’s facilities. Grantee further agrees to restore the Easement Property (or any other District property affected by Grantee) to the satisfaction of the Grantor in accordance with the conditions set forth in Exhibit C, “Restoration Plan for Activities on Bureau of Reclamation and Clark County Lands within and outside of the Wetlands Park Boundaries”, attached hereto and by this reference incorporated herein. Any costs, charges, and/or billings issued to the District arising out of or resulting from the implementation and/or conformance with the Restoration Plan shall be paid for by the CWC within thirty (30) days of receipt of billing.

Grantee further agrees, except as otherwise approved in writing by the Grantor, not to adjust or modify the natural terrain elevations of the Easement Property.
11. In order to mitigate the adverse effects of the Grantee’s Improvements, Grantee at its sole cost and expense agrees to perform to the satisfaction of the Grantor the mitigation measures as required to return the property to the original condition prior to construction.

12. Grantor is granting the Easements in “as-is” condition and under the assumption that Grantee’s acquisition of the Easements is based upon Grantor’s independent investigation. Grantor makes no warranties regarding the physical condition or stability of the Easements, the existence of hazardous materials on or under the surface or the suitability of the Easements for Grantee’s purposes or for any other purpose.

Grantee acknowledges that stockpiles of boulders, rocks or rubble may exist throughout the easement area. If the construction of the Improvements requires any stockpile to be removed and/or relocated, Grantee shall be responsible for contacting the owner of the stockpile to coordinate the relocation and/or removal of said stockpile. Such relocation and/or removal shall be at the Grantee’s sole cost and expense.

13. The Easements are subject and subordinate to all existing rights, encumbrances, obligations, restrictions, covenants and conditions and the right and power of the Grantor to construct, maintain, repair, renew, use, operate, change, modify and/or relocate improvements on District property. Said improvements by Grantor may be freely done at any time or times by the Grantor without liability to the Grantee or to any other party for compensation or damages, except for the actual cost of repair to any of Grantees Improvements caused by Grantor’s negligence. Grantor makes no representations or warranties as to the validity of its title and/or ownership rights in the Easements conveyed. Grantee waives any causes of action and or claims against the Grantor regarding the validity of title or condition of the Easements conveyed herein. This Grant of Easement only conveys those rights held by the Grantor on the date of this Grant of Easement. Grantor specifically is not authorized to interfere with any other rights which exist in the Easement Property and hereby agrees to indemnify, defend, protect and save harmless the District, its officers and employees, from and against any and all liability, damages, claims, suits, liens, and of judgments of whatever nature which arise out of or are related to Grantee’s use of the Easement Property. It shall be the Grantor’s sole obligation to obtain such additional permission, license and grants necessary on account of any such existing rights.

14. Grantee shall indemnify, defend and hold harmless Grantor and its officers, agents, employees and volunteers, against and from any and all liability, fines, losses, damages, liens, encumbrances, claims, demands, lawsuits, judgments, actions, litigation, costs and expenses of whatever nature, including court costs, expert witness fees and attorney’s fees, and all court or arbitration or other alternative dispute resolution costs, whether false, fraudulent or groundless, which may result from injury to or death of any person, or against and from damage to or loss or destruction or claims relating to property whatsoever, when such injury, death, loss, destruction, claim or damage is due to or arising from or as a result of the construction, operation, addition to, maintenance, or removal of the Improvements, or any work, action or inaction by Grantee, its officers, employees, agents, volunteers, representatives, contractors, or subcontractors.

15. Additionally, Grantee must coordinate its activities with Grantor. Grantee understands and agrees that throughout the duration of the Easements, Grantor will be constructing various improvements on and within the Easement Property. Grantee agrees to adjust its operations so as to not interfere, disrupt and/or delay any of Grantor’s projects, including Grantor’s contractor’s work. Grantee also agrees to coordinate all its activities with Grantor’s contractors and Grantee agrees to be responsible for and to indemnify and defend Grantor for any damages, delays, claims, causes of actions that arise out of or related to conflicts between the Grantee, its contractors and the Grantor’s contractors.

16. Grantee understands and agrees that the Easements to be provided herein are susceptible to water run off and flooding. Grantee agrees not to in any way prohibit, block, interfere or restrict the flow of water in the Easement Property, and Grantee also further agrees that Grantor will not be liable or responsible for any clean up and/or damages whatsoever to the Grantor’s Improvements and/or property and equipment as a result of water flow and/or flooding in the Easement Property. Grantee waives any and all causes of action and/or claims it may have against Grantor for any damages whatsoever to the Improvements resulting from water flows and/or flooding-.
17. All Improvements that are constructed or installed in the Easements by the Grantee for the underground pipeline shall be and shall at all times remain the property of the Grantee.

18. Upon completion of the construction of the Improvements, Grantee shall within thirty (30) days provide the District with a complete set of "as built" drawings which clearly depict the location of the Improvements.

19. The Grantee shall fully pay for all materials joined or affixed to and labor performed upon Easement Property of the Grantor in connection with construction, maintenance, repair, renewal, modification or reconstruction of the improvements, and shall not permit or suffer any mechanic's or material man's lien of any kind or nature to be enforced against the Easement Property for any work done or materials furnished thereon at the instance or request on behalf of the Grantee. If any lien or encumbrance is placed upon any of Grantor's property as a result of the Grantee's actions, then Grantee shall immediately take all necessary actions including legal action to remove said lien and/or encumbrance and Grantee shall further indemnify and defend Grantor against any action arising out of or related to a lien or encumbrance on Grantor's property.

20. The Grantee shall promptly pay or discharge all taxes, charges, fees, costs, payments and assessments levied upon, in respect to, or on account of the Improvements, to prevent the same from becoming a charge or lien upon the Easement Property or any other property of the Grantor, and so that the taxes, charges, fees, costs, payments and assessments levied upon or in respect to such Easement Property shall not be increased because of the location, construction or maintenance of the Improvements or any improvement, appliance or fixture connected therewith placed upon such property, or on account of the Grantee's interest therein. Where such tax, charges, fees, costs, payments or assessment may not be separately made or assessed to the Grantee but shall be included in the assessment of the property of the Grantor, then the Grantee shall pay to the Grantor an equitable proportion of such taxes determined by the value of the Grantee's Easement Property within the property of the Grantor as compared with the entire value of such property.

21. The Grantee shall not assign the Easements, in whole or in part, or any rights herein granted, without the written consent of the Grantor, and it is agreed that any transfer or assignment or attempted transfer or assignment of this Easement or any other rights herein granted, whether voluntary, by operation of law, or otherwise, without such consent in writing, shall be absolutely void and, at the option of the Grantor, shall terminate this Easement.

22. Subject to the provisions of Section 21 hereof, the Easements shall be binding upon and inure to the benefit of the parties hereto, their successors and assigns.

The undersigned individuals hereby warrant and represent that they each have full legal authority to sign this Grant of Easement and bind the parties hereto.

IN WITNESS WHEREOF, the said GRANTOR(S) have hereunto affixed their signatures this __________ day of ________________, 2009.

CLARK COUNTY WATER RECLAMATION DISTRICT

_________________________
(Signature)

_________________________
(Print Name)

_________________________
(General Manager)
COUNTY OF CLARK
STATE OF NEVADA

On this ___ day of __________, 2009
personally appeared before me, a Notary Public in and for
said County and State,

________________________
known to me to be the person(s) described in and who
executed the same freely and voluntarily and for the
uses and purposes therein mentioned.

Notary Public
Commission Expires

CLEAN WATER COALITION, a political subdivision of the State of Nevada

________________________
(Signature)

Douglas W. Karafa
(Print Name)

________________________
(Title)

COUNTY OF CLARK
STATE OF NEVADA

On this ___ day of __________, 2009
personally appeared before me, a Notary Public in and for
said County and State,

________________________
known to me to be the person(s) described in and who
executed the same freely and voluntarily and for the
uses and purposes therein mentioned.

Notary Public
Commission Expires __________
EXHIBITS “A-1 AND A-2”

PERMANENT LEGAL DESCRIPTIONS

FOR

NON-EXCLUSIVE EASEMENT
EXHIBIT "A-1"

PBSJ
2270 Corporate Circle, Suite 100
Henderson, Nevada 89074-6382
Telephone 702.283.7275
Fax 702.283.7200
www.pbjs.com

EXPLANATION: THIS LEGAL DESCRIBES A PARCEL OF LAND INTENDED FOR USE AS A PERMANENT EASEMENT FOR THE CLEAN WATER COALITION.

LEGAL DESCRIPTION
CLARK COUNTY SANITATION DISTRICT
APNS 161-14-401-001 AND 161-23-101-001

A PORTION OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14 AND A PORTION OF THE NORTH HALF (N 1/2) OF SECTION 23, TOWNSHIP 21 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 14; THENCE NORTH 00°10'07" WEST, ALONG THE WEST LINE OF SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 14, A DISTANCE OF 947.24 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING NORTH 00°10'07" WEST, ALONG SAID WEST LINE, 25.90 FEET; THENCE SOUTH 50°43'40" EAST, DEPARTING SAID WEST LINE, 123.68 FEET; THENCE SOUTH 05°43'40" EAST, 141.00 FEET; THENCE SOUTH 28°13'40" EAST, 1813.44 FEET; THENCE SOUTH 50°51'07" EAST, 765.66 FEET; THENCE SOUTH 06°01'55" EAST, 62.11 FEET; THENCE SOUTH 52°15'32" EAST, 97.48 FEET; THENCE NORTH 37°44'28" EAST, 27.09 FEET; THENCE SOUTH 52°15'32" EAST, 193.10 FEET; THENCE SOUTH 57°44'28" WEST, 27.09 FEET; THENCE SOUTH 52°15'32" EAST, 514.60 FEET; THENCE NORTH 82°47'07" EAST, 35.36 FEET; THENCE SOUTH 52°12'53" EAST, 1280.80 FEET TO THE SOUTH LINE OF THE NORTH HALF (N 1/2) OF SAID SECTION 23; THENCE SOUTH 89°40'06" WEST, ALONG SAID SOUTH LINE, 32.40 FEET; THENCE NORTH 52°12'53" WEST, DEPARTING SAID SOUTH LINE, 1247.03 FEET; THENCE SOUTH 82°47'07" WEST, 35.35 FEET; THENCE NORTH 52°15'32" WEST, 587.79 FEET; THENCE SOUTH 37°44'28" WEST, 21.57 FEET; THENCE NORTH 52°15'32" WEST, 25.15 FEET; THENCE SOUTH 37°46'32" WEST, 42.57 FEET; THENCE SOUTH 07°13'28" EAST, 106.21 FEET; THENCE SOUTH 42°13'28" EAST, 1018.40 FEET; THENCE SOUTH 00°00'00" WEST, 229.40 FEET TO SAID SOUTH LINE; THENCE SOUTH 89°40'06" WEST, ALONG SAID SOUTH LINE, 55.00 FEET; THENCE NORTH 00°00'00" EAST, DEPARTING SAID SOUTH LINE, 208.48 FEET; THENCE NORTH 42°13'28" WEST, 1014.51 FEET; THENCE NORTH 07°13'28" WEST, 146.33 FEET; THENCE NORTH 37°46'32" WEST, 65.32 FEET; THENCE NORTH 52°15'32" WEST, 39.34 FEET; THENCE SOUTH 37°47'10" WEST, 83.45 FEET; THENCE SOUTH 71°02'31" WEST, 509.20 FEET; THENCE NORTH 18°33'24" EAST, 10.80 FEET; THENCE SOUTH 71°26'36" WEST, 20.00 FEET; THENCE NORTH 18°33'24" WEST, 30.66 FEET; THENCE NORTH 71°02'31" EAST, 523.08 FEET; THENCE NORTH 37°47'10" EAST, 79.57 FEET; THENCE NORTH 52°13'28" WEST, 10.00 FEET; THENCE NORTH 37°46'32" EAST, 19.56 FEET; THENCE NORTH 52°15'32" WEST, 84.73 FEET; THENCE NORTH 06°01'55" WEST, 62.39 FEET; THENCE NORTH 50°51'07" WEST, 761.41
FEET; THENCE NORTH 28°13'40" WEST, 1821.42 FEET; THENCE NORTH 05°43'40" WEST, 136.69 FEET; THENCE NORTH 50°43'40" WEST, 98.94 FEET TO THE POINT OF BEGINNING.

CONTAINING 198,779 SQUARE FEET (4.56 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701).
DESCRIPTION: PERMANENT EASEMENT – CLEAN WATER COALITION

SHEET 1 OF 3
SEE SHEET 3 OF 3
FOR LINE TABLE

SCALE: 1" = 300'

PROJECT No.: 511352
DATE: 05-07-07
CALC. BY TLH
CHECKED BY EC
DRAWN BY TLH
REVISED: 07-21-08

OWNER: CLARK COUNTY SANITATION DISTRICT
PARCEL Nos.: 161-14-401-001 & 161-23-101-001
SECTION 14 & 23, TOWNSHIP 21 SOUTH, RANGE 62 EAST
TOTAL AREA OF PARCEL: 80.00 ACRES
AREA OF PERMANENT EASEMENT - CLEAN WATER COALITION: 198.7794 S.F. (4.56 AC.)
TOTAL REMAINING AREA OF PARCEL: 75.44 ACRES
REFERENCE: 511352-CC SAN

AREA OF PERMANENT EASEMENT
CLEAN WATER COALITION

375.03' N00°10'07"W L17 P.O.B.
947.24' 1348.17'

1813.44'
1821.42'

N84°49'28"E

P.O.C.

1/16
16/16

L30
L23

S8°13'40"E
N28°13'40"W

MATCH LINE SEE SHEET 2 OF 3
**DESCRIPTION: PERMANENT EASEMENT – CLEAN WATER COALITION**

**LINE TABLE**

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**PROJECT No.: 511352**

**DATE: 05-07-07**

**CALC. BY: TLH**

**CHECKED BY: EC**

**DRAWN BY: TLH**

**REVISED: 07-21-08**

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**SCALE: 1" = 300'**

---

**OWNER: CLARK COUNTY SANITATION DISTRICT**

**PARCEL Nos.: 161-14-401-001 & 161-23-101-001**

**SECTION 14 & 23, TOWNSHIP 21 SOUTH, RANGE 62 EAST**

**TOTAL AREA OF PARCEL: 80.00 ACRES**

**AREA OF PERMANENT EASEMENT – CLEAN WATER COALITION: 198.779± S.F. (4.56 AC.)**

**TOTAL REMAINING AREA OF PARCEL: 75.44 ACRES**

**REFERENCE: 511352-CC SAN**

---

**AREA OF PERMANENT EASEMENT – CLEAN WATER COALITION**
EXHIBIT “A-2”

LEGAL DESCRIPTION
CLARK COUNTY SANITATION DISTRICT
APN 161-14-401-001

A PORTION OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14, TOWNSHIP 21 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 14; THENCE NORTH 00°10'07" WEST, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 14, A DISTANCE OF 1348.17 FEET TO THE NORTHWEST CORNER OF SAID SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14; THENCE NORTH 89°42'37" EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), 148.88 FEET; THENCE SOUTH 00°17'23" EAST, DEPARTING SAID NORTH LINE, 19.86 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 82°04'26" EAST, 10.00 FEET; THENCE SOUTH 07°55'34" WEST, 444.44 FEET; THENCE NORTH 05°43'40" WEST, 7.41 FEET; THENCE NORTH 50°43'40" WEST, 9.66 FEET; THENCE NORTH 07°55'34" EAST, 432.22 FEET TO THE POINT OF BEGINNING.

CONTAINING 4,358 SQUARE FEET (0.10 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701).
EXHIBITS “B-1 AND B-2”

TEMPORARY LEGAL DESCRIPTIONS FOR NON-EXCLUSIVE EASEMENT
EXHIBIT “B-1”

PBS&J
2270 Corporate Circle, Suite 100
Henderson, Nevada 89074-6382
Telephone 702.263.7275
Fax 702.263.7200
www.pbsj.com

EXPLANATION: THIS LEGAL DESCRIBES FIVE PARCELS OF LAND INTENDED FOR USE AS TEMPORARY CONSTRUCTION EASEMENTS FOR THE CLEAN WATER COALITION.

LEGAL DESCRIPTION
CLARK COUNTY SANITATION DISTRICT
APNS 161-14-401-001 & 161-23-101-001

A PORTION OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14 AND A PORTION OF THE NORTH HALF (N 1/2) OF SECTION 23, TOWNSHIP 21 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

PARCEL A
BEGINNING AT THE NORTHWEST CORNER OF SAID SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14; THENCE NORTH 89°42'37" EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), A DISTANCE OF 53.95 FEET; THENCE SOUTH 00°01'40" EAST, DEPARTING SAID NORTH LINE, 181.35 FEET; THENCE SOUTH 28°13'41" EAST, 101.02 FEET; THENCE SOUTH 50°43'40" EAST, 117.59 FEET; THENCE SOUTH 28°13'41" EAST, 100.92 FEET; THENCE SOUTH 05°43'40" EAST, 117.59 FEET; THENCE SOUTH 28°13'41" EAST, 903.05 FEET TO THE SOUTH LINE OF SAID SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14; THENCE SOUTH 89°49'28" WEST, ALONG SAID SOUTH LINE, 164.30 FEET; THENCE NORTH 28°13'41" WEST, DEPARTING SAID SOUTH LINE, 854.62 FEET; THENCE NORTH 05°43'40" WEST, 140.99 FEET; THENCE NORTH 50°43'40" WEST, 123.68 FEET; THENCE NORTH 00°10'07" WEST, 375.03 FEET TO THE POINT OF BEGINNING.

CONTAINING 192,449 SQUARE FEET (4.42 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

PARCEL B
COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 23; THENCE NORTH 89°49'28" EAST, ALONG THE NORTH LINE OF SAID SECTION 23, A DISTANCE OF 369.54 FEET TO THE POINT OF BEGINNING; THENCE NORTH 89°49'28" EAST, 118.97 FEET; THENCE SOUTH 28°13'41" EAST, DEPARTING SAID NORTH LINE, 973.49 FEET; THENCE SOUTH 50°51'07" EAST, 608.51 FEET; THENCE SOUTH 86°12'20" WEST, 29.94 FEET; THENCE
SOUTH 53°01'39" WEST, 97.93 FEET; THENCE NORTH 51°01'55" WEST, 554.79 FEET; THENCE NORTH 28°13'41" WEST, 1082.20 FEET TO THE POINT OF BEGINNING.

CONTAINING 174,771 SQUARE FEET (4.01 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

PARCEL C

COMMENCING AT THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER (NE 1/4) OF SAID SECTION 23; THENCE NORTH 89°40'06" EAST, ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER (NE 1/4) OF SECTION 23, A DISTANCE OF 572.70 FEET TO THE POINT OF BEGINNING; THENCE NORTH 52°12'53" WEST, DEPARTING SAID SOUTH LINE, 1280.80 FEET; THENCE SOUTH 82°47'07" WEST, 35.36 FEET; THENCE NORTH 52°15'32" WEST, 514.60 FEET; THENCE NORTH 37°44'28" EAST, 27.09 FEET; THENCE NORTH 52°15'32" WEST, 193.10 FEET; THENCE SOUTH 37°44'28" WEST, 27.09 FEET; THENCE NORTH 52°15'32" WEST, 97.48 FEET; THENCE NORTH 06°01'55" WEST, 53.21 FEET; THENCE NORTH 89°44'48" EAST, 54.17 FEET; THENCE SOUTH 53°19'39" EAST, 197.12 FEET; THENCE SOUTH 52°12'53" EAST, 1971.80 FEET TO SAID SOUTH LINE; THENCE SOUTH 89°40'06" WEST, ALONG SAID SOUTH LINE, 81.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 123,429 SQUARE FEET (2.83 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

PARCEL D

COMMENCING AT THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER (NE 1/4) OF SAID SECTION 23; THENCE NORTH 89°40'06" EAST, ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER (NE 1/4) OF SECTION 23, A DISTANCE OF 370.20 FEET TO THE POINT OF BEGINNING; THENCE NORTH 52°12'53" WEST, DEPARTING SAID SOUTH LINE, 1595.39 FEET; THENCE SOUTH 37°07'56" WEST, 46.17 FEET; THENCE SOUTH 42°13'28" EAST, 951.49 FEET; THENCE SOUTH 00°00'00" WEST, 239.86 FEET; THENCE SOUTH 89°40'06" WEST, 27.50 FEET; THENCE NORTH 00°00'00" EAST, 229.40 FEET; THENCE NORTH 42°13'28" WEST, 1018.40 FEET; THENCE NORTH 07°13'28" WEST, 106.21 FEET; THENCE NORTH 37°46'32" EAST, 42.57 FEET; THENCE SOUTH 52°15'32" EAST, 25.15 FEET; THENCE NORTH 37°44'42" EAST, 21.67 FEET; THENCE SOUTH 52°15'32" EAST, 587.79 FEET; THENCE NORTH 82°47'07" EAST, 35.35 FEET; THENCE SOUTH 52°12'53" EAST, 1247.03 FEET TO SAID SOUTH LINE; THENCE SOUTH 89°40'06" WEST, ALONG SAID SOUTH LINE, 170.10 FEET TO THE POINT OF BEGINNING.

CONTAINING 214,066 SQUARE FEET (4.91 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

PARCEL E

COMMENCING AT THE SOUTHWEST CORNER OF THE NORTHWEST QUARTER (NW 1/4) OF SAID SECTION 23; THENCE SOUTH 89°40'06" WEST, ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER (NW 1/4) OF SECTION 23, A DISTANCE OF 361.61 FEET TO THE POINT OF BEGINNING, THENCE CONTINUING SOUTH 89°40'06" WEST, 72.50 FEET; THENCE NORTH 00°00'00" EAST, DEPARTING SAID SOUTH LINE, 247.87 FEET; THENCE
NORTH 42°13'28" WEST, 945.60 FEET; THENCE NORTH 07°13'28" WEST, 162.36 FEET; THENCE SOUTH 71°26'36" WEST, 39.14 FEET; THENCE NORTH 18°57'29" WEST, 9.87 FEET; THENCE NORTH 71°02'31" EAST, 27.81 FEET; THENCE NORTH 37°47'10" EAST, 83.45 FEET TO A POINT HEREAFTER REFERRED TO AS "POINT 1"; THENCE SOUTH 52°15'32" EAST, 39.34 FEET; THENCE SOUTH 37°46'32" WEST, 65.52 FEET; THENCE SOUTH 07°13'28" EAST, 146.33 FEET; THENCE SOUTH 42°13'28" EAST, 1014.51 FEET; THENCE SOUTH 00°00'00" WEST, 208.48 FEET TO THE POINT OF BEGINNING.

CONTAINING 51,056 SQUARE FEET (1.17 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

PARCEL F
COMMENCING AT THE AFORMENTIONED "POINT 1"; THENCE NORTH 46°14'59" WEST, 20.11 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 37°47'10" WEST, 79.57 FEET; THENCE SOUTH 71°02'31" WEST, 21.83 FEET; THENCE NORTH 52°52'04" WEST, 109.73 FEET; THENCE NORTH 37°07'56" EAST, 99.37 FEET; THENCE NORTH 00°01'55" WEST, 90.59 FEET; THENCE SOUTH 50°51'07" EAST, 47.64 FEET; THENCE SOUTH 06°01'55" EAST, 62.39 FEET; THENCE SOUTH 52°15'32" EAST, 84.73 FEET; THENCE SOUTH 37°46'32" WEST, 19.56 FEET; THENCE SOUTH 52°13'28" EAST, 10.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 16,421 SQUARE FEET (0.38 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

TOTAL TEMPORARY CONSTRUCTION EASEMENTS CONTAIN 772,192 SQUARE FEET (17.72 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701).
DESCRIPTION: TEMPORARY CONSTRUCTION EASEMENTS - CLEAN WATER COALITION

SHEET 4 OF 6
SEE SHEET 6 OF 6
FOR LINE TABLES

OWNER: CLARK COUNTY SANITATION DISTRICT
PARCEL No.: 161-23-101-001
SECTION 23, TOWNSHIP 21 SOUTH, RANGE 62 EAST
TOTAL AREA OF PARCEL: 280.00 ACRES
AREA OF TEMPORARY CONSTRUCTION EASEMENTS - CLEAN WATER COALITION:
TOTAL REMAINING AREA OF PARCEL: 272.26 ACRES

PROJECT No.: 511352
DATE: 05-14-07
CALC. BY: TLH
CHECKED BY: EC
DRAWN BY: TLH
REvised: 07-18-08

NOT TO SCALE:

REFERENCE: 511352-CC SAN
DESCRIPTION: TEMPORARY CONSTRUCTION EASEMENT – CLEAN WATER COALITION

SHEET 5 OF 6

NOT TO SCALE:

SEE SHEET 6 OF 6 FOR LINE TABLES

SEE DETAIL ABOVE

OWNER: CLARK COUNTY SANITATION DISTRICT
PARCEL No.: 161-23-101-001
SECTION 23, TOWNSHIP 21 SOUTH, RANGE 62 EAST
TOTAL AREA OF PARCEL: 280.00 ACRES
AREA OF TEMPORARY CONSTRUCTION EASEMENT – CLEAN WATER COALITION: PARCEL E 51,056± S.F. (1.17 AC.)
TOTAL REMAINING AREA OF PARCEL: 278.45 ACRES
REFERENCE: 511352-CC SAN

PROJECT No.: 511352
DATE: 05-14-07
CALC. BY TLH
CHECKED BY EC
DRAWN BY TLH
REVISED 08-21-08

NOT TO SCALE:
DESCRIPTION: TEMPORARY CONSTRUCTION EASEMENT - CLEAN WATER COALITION

SHEET 6 OF 6

PROJECT No.: 511352
DATE: 05-14-07
CALC. BY __________
CHECKED BY __________
DRAWN BY __________
REVISED 08-21-08

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OWNER: CLARK COUNTY SANITATION DISTRICT

PARCEL No.: 161-23-101-001

AREA OF TEMPORARY CONSTRUCTION EASEMENT - CLEAN WATER COALITION

TOTAL AREA OF PARCEL: 280.00 ACRES

TOTAL OF ALL EASEMENTS

AREA OF TEMPORARY CONSTRUCTION EASEMENT - CLEAN WATER COALITION: 772.192+ S.F. (17.72 AC.)

TOTAL REMAINING AREA OF PARCEL: 262.28 ACRES

REFERENCE: 511352-CC SAN
EXHIBIT “B-2”

LEGAL DESCRIPTION
CLARK COUNTY SANITATION DISTRICT
APN 161-14-001-001

PORTIONS OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 14, TOWNSHIP 21 SOUTH, RANGE 62 EAST, M.D.M., CLARK COUNTY, NEVADA, MORE PARTICULARLY DESCRIBED AS FOLLOWS.

PARCEL “A”
COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 14; THENCE NORTH 00°10’07” WEST, ALONG THE WEST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 14, A DISTANCE OF 1348.17 FEET TO THE NORTHWEST CORNER OF SAID SOUTHWEST QUARTER (SW 1/4) OF SAID SOUTHWEST QUARTER (SW 1/4) OF SECTION 14; THENCE NORTH 89°42’37” EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), 138.98 FEET; THENCE SOUTH 00°17’23” EAST, DEPARTING SAID NORTH LINE, 18.44 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 82°04’26” EAST, 10.00 FEET TO A POINT HEREINAFTER REFERRED TO AS “POINT 1”; THENCE SOUTH 07°55’34” WEST, 432.22 FEET; THENCE NORTH 50°43’40” WEST, 11.71 FEET; THENCE NORTH 07°55’34” EAST, 426.13 FEET TO THE POINT OF BEGINNING.

CONTAINING 4,292 SQUARE FEET (0.10 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.

PARCEL “B”
COMMENCING AT THE AFOREMENTIONED “POINT 1”; THENCE SOUTH 82°04’26” EAST, 10.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 82°04’26” EAST, 10.00 FEET; THENCE SOUTH 07°55’34” WEST, 485.61 FEET; THENCE NORTH 05°43’40” WEST, 42.36 FEET; THENCE NORTH 07°55’34” EAST, 444.44 FEET TO THE POINT OF BEGINNING.

CONTAINING 4,650 SQUARE FEET (0.11 ACRES) MORE OR LESS, AS DETERMINED BY COMPUTER METHODS.
### Table: Area of Temporary Construction Easements - Fiber Optics Line

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**Scale:** 1" = 300'

**Parcel No.:** 181-14-401-001

**Total Area of Parcel:** 80.00 Acres

**Parcel "A"** 4.292: S.F. (0.10 AC)

**Parcel "B"** 4.650: S.F. (0.11 AC)

**Owner:** Clark County Sanitation District

**Section:** 14, Township 21 South, Range 62 East

**Area of Temporary Construction Easements - Fiber Optics Line:** 79.79 Acres

**Total Remaining Area of Parcel:** 79.79 Acres
BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS GRID NORTH AS DEFINED BY THE NEVADA COORDINATE SYSTEM OF 1983 (NCS83), EAST ZONE, (2701).
EXHIBITS "C"

SYSTEM CONVEYANCE AND OPERATION PROGRAM

RESTORATION PLAN

FOR

ACTIVITIES ON BUREAU OF RECLAMATION LAND

AND

CLARK COUNTY LANDS WITHIN AND OUTSIDE

OF THE WETLANDS PARK BOUNDARIES
EXHIBIT "C"

SYSTEMS CONVEYANCE AND OPERATIONS
PROGRAM

Restoration Plan
for Activities on
Bureau of Reclamation
and
Clark County Lands within and outside of the
Wetlands Park Boundaries

October 2008
# TABLE OF CONTENTS

Table of Contents ........................................................................................................................................... i
List of acronyms ............................................................................................................................................... ii

1.0 INTRODUCTION ........................................................................................................................................ 1
   1.1 Restoration Goals .................................................................................................................................. 1
   1.2 Description of Project ........................................................................................................................... 2

2.0 RESTORATION ........................................................................................................................................ 4
   2.1 Activities prior to Construction ........................................................................................................ 4
   2.2 Activities during Construction ........................................................................................................... 5
      2.2.1 Weed Control .............................................................................................................................. 5
      2.2.2 Vegetation .................................................................................................................................... 5
   2.3 Activities following Construction ....................................................................................................... 6
      2.3.1 Contours ........................................................................................................................................ 6
      2.3.2 Vegetation ..................................................................................................................................... 6

3.0 Monitoring Site Restoration & Completion .............................................................................................. 7

4.0 Emergency Protocol and Points of Contact ............................................................................................ 8
<table>
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<tr>
<th>Acronym</th>
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<td>Systems Conveyance and Operations Program</td>
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1.0 INTRODUCTION

The Clean Water Coalition (CWC) shall implement the Systems Conveyance and Operations Program (SCOP). The CWC is comprised of the three agencies currently responsible for wastewater treatment in the Las Vegas Valley: the City of Las Vegas (CLV), the City of North Las Vegas (CNLV), the City of Henderson (COH), and the Clark County Water Reclamation District (CCWRD). The SCOP includes optimization of the treatment plants, increased treatment (as needed), and a pipeline to discharge highly treated effluent into the Lower Colorado River System via Lake Mead.

The Bureau of Reclamation (Reclamation) and National Park Service (NPS) prepared an Environmental Impact Statement for SCOP. The Final Environmental Impact Statement (FEIS) was completed in October 2006. Reclamation and NPS issued Records of Decision (RODs) on July 9 and July 5, 2007, respectively. The RODs stated that each agency shall issue a right-of-way permit to the CWC to construct and operate the SCOP pipeline on their lands.

The SCOP includes activities and infrastructure that would be located on lands owned or managed by private entities, the CLV, the COH, Clark County, Reclamation, NPS, and the U.S. Bureau of Land Management (BLM), all within Clark County, Nevada. This Restoration Plan addresses activities that shall occur on land owned by Reclamation and Clark County.

The CWC shall coordinate with other agencies that have planned and on-going projects in and along the Las Vegas Wash. Coordination with Clark County Parks and Recreation for activities within the Wetlands Park shall occur throughout the construction and restoration phases of the project.

1.1 Restoration Goals

The surface areas that are disturbed during SCOP construction activities shall be restored to pre-construction conditions. The vegetation, soil conditions, and wildlife habitat shall be restored in the disturbed areas. Due to the regionally arid climate, vegetation recovers slowly over several years. Therefore, monitoring of the area to determine successful restoration shall occur for 5 years.

The topography of the disturbed areas shall be restored to pre-construction conditions. The surface shall be contoured to ensure that natural drainage channels and flow paths are re-established.

The CWC shall be responsible for dust suppression activities throughout the duration of restoration activities. Additionally, the CWC will be responsible for any dust suppression issues that arise as a result of the SCOP project for the life of the SCOP project until it is decommissioned or transferred.

Restoration goals for vegetation include plant survivability after 1 year of 80-percent or better for all plants (cactus, yucca, and transplants). Restoration shall be monitored annually for plant survivability for a period of 5 years from completion of planting the sites. Concurrently with the survivability monitoring, percent-cover data shall be collected. If survivability numbers drop below 80 percent from the original plantings within 5 years, the restoration site shall be replanted to replace vegetation that has died. If plants need to be replaced during the restoration process, the replacement plants shall be monitored for the 5-year period to ensure survival. If more than 40 percent of the plants on the restoration site die over the 5-year monitoring timeframe then the 5-year monitoring timeline shall...
be reset to the date of the most recent replanting of the restoration site to ensure continuity within the restoration area. Survivability will be measured by using random plots and transects throughout the restoration area. Survivability will also be measured by tracking individual plant success. A more detailed sampling framework will be developed in conjunction with the contractor that is hired to perform the restoration.

Percent-cover data shall be collected for years 4 and 5 after completion of planting at the restoration sites. If percent-cover decreases in years 4 and 5, the data shall be summarized and reported to Reclamation. After review of the data and a site visit, Reclamation shall determine whether additional restoration activities need to be conducted to restore the site as closely as possible to preconstruction conditions. Percent cover will be measured by using random plots and transects throughout the restoration area. A more detailed sampling framework will be developed in conjunction with the contractor that is hired to perform the restoration.

Additionally, the 5-year monitoring activities shall include monitoring for colonization of federal and state noxious weeds. Should populations of noxious weeds arise in the restoration area they shall be eradicated. Noxious and invasive weeds will not be counted toward percent cover or survivability data.

Herbivory may be an issue with restoration in this area. It should be noted that measures may need to be taken to prevent herbivory from impacting restoration. Measures taken may include repellants, protective fencing, or any other means by which herbivory could be prevented.

1.2 Description of Project

A detailed description of the entire SCOP pipeline and ancillary facilities are presented in Chapter 2 of the SCOP FEIS. This Restoration Plan addresses the construction activities for segments (reaches) and facilities to be located on Reclamation land and Clark County lands. Therefore, although the pipeline begins at the CLV Water Pollution Control Facility and terminates near the Boulder Islands in Lake Mead, this Plan includes restoration activities to be conducted for Reach 2, Reach 3, E1 Terminus, the COH Forcemain, the temporary power line alignment, and the RMT3 (Reach 4) Staging Area.

Figure 1-1 shows the restoration areas to be addressed in this Plan. The restoration activities described in the following sections shall be conducted within the 175-foot corridor for the temporary and permanent disturbances beginning in Reach 2 at the Wetlands Park northern boundary and terminating at the E1 Terminus. Staging area locations are shown on Figure 2.3-1 of the SCOP FEIS and on Figure 1-1 of this Plan.

It is assumed that the majority of the excavated material would be used as trench backfill or shall be used during final grading. However, if excess material is from an area with known weed populations it will be disposed of at an appropriate facility to avoid spreading weeds to other areas. Excess excavated material would be used for beneficial purposes on local- or federal-government lands, or hauled to the nearest landfill for disposal.

The schedule for construction activities on Reclamation land are shown in Table 1.
Figure 1-1: Restoration Areas

- Bureau of Reclamation
- Clark County Public Works
- Wetlands Park
- SCOP Alignment
- Clark County Parks and Recreation
Table 1. Construction Schedule

<table>
<thead>
<tr>
<th>Reach or Facility</th>
<th>Construction Start</th>
<th>Construction Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach 1 Pipeline</td>
<td>January 2009</td>
<td>June 2011</td>
</tr>
<tr>
<td>Reach 2 Pipeline</td>
<td>January 2009</td>
<td>July 2011</td>
</tr>
<tr>
<td>COH Foremain</td>
<td>January 2009</td>
<td>March 2011</td>
</tr>
<tr>
<td>Reach 3 Pipeline</td>
<td>March 2009</td>
<td>June 2011</td>
</tr>
<tr>
<td>Reach 3 Tunnel</td>
<td>June 2009</td>
<td>June 2011</td>
</tr>
</tbody>
</table>

2.0 RESTORATION

Coordination with CWC, SNWA, Reclamation, and Clark County Parks and Recreation shall be conducted throughout the construction and restoration process. The CWC shall be responsible for dust suppression activities throughout the duration of restoration activities. Additionally, the CWC will be responsible for any dust suppression issues that arise as a result of the SCOP project for the life of the SCOP project until it is decommissioned or transferred.

2.1 Activities prior to Construction

The following activities shall be conducted before construction activities begin.

- Existing drainage patterns shall be documented to ensure the land surface contours are restored to pre-construction conditions.
- Existing off-road vehicle or two-track routes shall be noted.
- Soil surfaces shall be inspected to identify the soil types present and the extent and type of soil stabilization present.
- Coordination with CWC, SNWA, Reclamation, and Clark County Parks and Recreation shall be conducted to identify the Wetlands Park restoration sites and to ensure (to the extent possible) that these sites shall not be disturbed.
- Existing vegetative cover shall be identified and documented using field notes and photos.
- The location and orientation of cacti and yucca shall be marked.
- Cacti and yucca within the construction areas will be excavated and transplanted. Protocols for the salvage and transplant of cacti and yucca are presented in Appendix A. The cacti and yucca will be excavated from areas that will experience disturbance, and will be immediately transplanted in a disturbed area of the construction site that is secured to not allow vandals and thieves access to the yucca and cactus. Each plant’s orientation must be marked, and GPS or other locational data will be needed for returning the plants to the site later. Thorough salvage efforts and proper topsoil management should ensure the health of the plants. In the event that the salvaged cacti and yucca die, Reclamation will require new plants to be purchased from a Reclamation-approved nursery to be planted during restoration activities. Reclamation will be contacted at the onset of any survivability issues with cacti and yucca so that there will be adequate time for CWC to find and/or generate at a nursery the necessary number of plants for restoration activities. Plant salvage operations shall be
conducted by qualified horticultural or biological staff prior to any ground disturbance. Should extenuating circumstances exist concerning plant storage onsite, the NPS nursery may be available for salvaged cactus and yucca storage. Reclamation will be consulted prior to making any decisions to use the NPS nursery for cactus and yucca storage.

2.2 Activities during Construction
The following activities shall be conducted during construction.

2.2.1 Weed Control
Construction vehicles shall be washed before entering the construction area to reduce the chance of spreading noxious weeds and exotic plants.

All construction equipment that will be used off surfaced routes, must be pressure washed to ensure freedom from exotic plant and noxious weed seeds prior to entering the project area. Vehicles shall be washed at an approved washing facility that provides for the capture and disposal of the foreign debris and weed seeds. This pressure washing shall be performed in a manner that will reasonably remove all soil, plant, and other foreign material from the undercarriage of equipment and from any surface where soil containing exotic/noxious seeds may exist. All such equipment is subject to inspection by the Reclamation to ensure compliance. Equipment that leaves the project area shall be re-washed prior to re-entering.

General guidelines for equipment washing are as follows.

- Vehicles that are normally used for highway driving and remain on asphalt pavement do not need washing.
- Vehicles used on well-maintained/traveled service routes do not need washing.
- Vehicles used and/or parked in approved staging/parking areas do not need washing.
- Delivery trucks such as those delivering construction supplies like concrete, culverts, aggregate base, steel, equipment, and other construction related supplies do not need washing.

The requirement for washing construction equipment being moved between areas within the Wetlands Park without leaving the Park will be discussed on a case by case basis. This will only be required if there is a substantiated danger of exotic plant and noxious weed seeds being moved from an infested area to a clean area within the Wetlands Park. The CWC will survey the construction areas for exotic and noxious plants and weeds before construction activities begin to identify areas of infestation. Using this information, Reclamation will designate weed infested areas and clean areas. Reclamation, with input from Clark County Parks and Recreation, will use the compiled data to designate areas within the Wetlands Park where equipment washing may take place so Contractors do not have to go outside the Wetland Park boundaries. When washing occurs within the Wetlands Park, all seeds and debris that are washed off of construction vehicles will be captured and disposed of at an appropriate facility to ensure that exotic and noxious plants and weeds are not spread throughout the project area.

2.2.2 Vegetation
As soon as possible, collect seeds, or other propagules, from the immediately surrounding area for propagation or direct seeding. Species composition and quantities shall reflect species composition in surrounding area. Seeds or other propagules shall be maintained so as to preserve viability and prevent rodent and insect infestation. Seeds and cuttings will be grown for
restoration purposes at the NPS nursery. This work will be coordinated with Alice Newton (293-8977) in conjunction with Reclamation. The NPS nursery needs a minimum of 18 months notice and preferably 24 months notice to grow the needed quantity of plants for restoration.

Topsoil shall be removed to a depth of 4 to 6 inches in all areas of potential seed-bearing soil where ground breaking shall take place and have a representative from Reclamation observe soil removal and stockpiling efforts to assist CWC and to ensure compliance. Topsoil from areas that are found to contain noxious weed populations will not be stockpiled and stored for restoration. The determination of which soils are potentially seed-bearing shall be the responsibility of the biologist. Removed topsoil shall be stockpiled in a separate area and designated as “topsoil” to prevent contamination by or combination with other excavated soils. Stockpile areas for topsoil shall be located in areas that are secure from construction traffic or flash floods. Storage may not occur on undisturbed areas, and soils must be piled so as to expose as little surface area as possible. Once a pile is completed, a biologist from Reclamation will determine whether water or a vegetal-based tackifier will be used. Once treated, it may not be run over or disturbed until respreading after construction. If major changes in topsoil are encountered, topsoil shall be placed in separate piles so that mixing does not occur. Large boulders (over 6 inches in diameter) in the topsoil may be placed in a separate pile for subsequent placement during topsoil replacement. They may not be stored on undisturbed areas.

Reasonable measures shall be taken to ensure the protection and preservation of the stockpiled topsoil to prevent loss of the seed bed from wind and rain or contamination by other soils or manmade contaminants. Where topsoil removal or project excavations are not required, any vegetation in the right-of-way shall be “bladed off” at ground level or simply crushed to preserve the root systems of the plants.

Respreading of the topsoil should be 2 to 4 inches deep. It is preferable to spread the topsoil 2-inches deep over a larger area than 4-inches deep over a smaller area. Storage time for the topsoil needs to be as brief as possible recognizing construction constraints. For pipelines, consider stripping topsoil in stages to replace it in other areas of the pipeline. The best case scenario would be to respread the topsoil within 3 to 6 months of excavation. However, Reclamation recognizes that this may not be possible because of construction constraints.

Washing of construction vehicles within the Wetlands Park will occur when vehicles are working within an area that has been found to contain noxious or invasive weeds (excluding red brome). The vehicles will be washed before leaving the area that contains the noxious weeds. This includes all vehicles that are driven in the disturbed project site that has been inventoried and found to have a positive weed presence (excluding material delivery trucks).

### 2.3 Activities following Construction

The following restoration activities shall be conducted once construction is completed.

#### 2.3.1 Contours

The topography shall be restored to pre-construction conditions, unless other contours are beneficial to Reclamation or Clark County Parks and Recreation.

#### 2.3.2 Vegetation

Respreading of the topsoil should be conducted as described in Section 2.2.2. The stored topsoil shall be respread and contoured to match existing soil types and terrain as closely as possible. Areas found to have populations of non-native vegetation will be restored using native vegetation that would have most likely occurred in the area at density and species levels that are similar to other areas of the project that closely mimic the specific habitat type. Boulders and rocks shall be
replaced in a natural manner, with portions buried beneath the soil surface. Interfaces between disturbed and undisturbed areas shall be hand raked to eliminate obvious edges. All tracks and equipment marks shall be raked away. Soil shall be stabilized with a fine spray of water or, if approved, a vegetal-based tackifier, worked to a depth of 1 inch. Once topsoil replacement has been finished, no vehicles or other motorized equipment of any kind shall be allowed back in the area.

If replaced rocks or boulders are lighter in color than surrounding ones, they shall be darkened to match with application of an artificial desert varnish. All boulders and surface rocks shall be washed before application of artificial desert varnish. Any artificial desert varnish used shall not alter soil pH in any way.

Propagated plants and/or previously collected seed or other propagules shall be planted, distributed or otherwise installed by qualified horticultural or biological staff in a manner consistent to produce a reasonable survival rate. Salvaged plant material shall be replanted by qualified horticultural or biological staff in a manner consistent to produce a reasonable survival rate.

2.3.3 Signage and Vertical Mulch

Signs may need to be placed at strategic points along the restoration corridor to ensure that the public using the area does not negatively impact the restoration site. Vertical mulch may need to be used to disguise areas in close proximity to access points. Vertical mulch is a good option for visually disguising a restoration area while the plants are growing back.

3.0 MONITORING SITE RESTORATION & COMPLETION

Restoration shall be monitored annually for plant survivability for a period of 5 years from completion of planting the sites. Concurrently with the survivability monitoring, percent-cover data shall be collected. If survivability numbers drop below 80 percent from the original plantings within 5 years, the restoration site shall be replanted to replace vegetation that has died. If plants need to be replaced during the restoration process, the replacement plants shall be monitored for the 5-year period to ensure survival. If more than 40 percent of the plants on the restoration site die over the 5 year monitoring timeframe then the 5-year monitoring timeline shall be reset to the date of the most recent replanting of the restoration site to ensure continuity within the restoration area. Survivability will be measured by using random plots and transects throughout the restoration area. Survivability will also be measured by tracking individual plant success. A more detailed sampling framework will be developed in conjunction with the contractor that is hired to perform the restoration. Increased monitoring frequency will allow problem areas within the restoration site to be discovered and resolved early on in the restoration process. Reclamation recommends more frequent monitoring in the first year of Restoration to determine which areas may need to have more attention to ensure successful restoration.

Percent-cover data shall be collected for years 4 and 5 after completion of planting at the restoration sites. If percent-cover decreases in years 4 and 5, the data shall be summarized and reported to Reclamation. After review of the data and a site visit, Reclamation shall determine whether additional restoration activities need to be conducted to restore the site as closely as possible to preconstruction conditions. Percent cover will be measured by using random plots and transects throughout the restoration area. A more detailed sampling framework will be developed in conjunction with the contractor that is hired to perform the restoration.

Additionally, the 5-year monitoring activities shall include monitoring for colonization of federal and state noxious weeds. Should populations of noxious weeds arise in the restoration area they
shall be eradicated. Noxious and invasive weeds will not be counted toward percent cover or survivability data.

4.0 EMERGENCY PROTOCOL AND POINTS OF CONTACT

In the case of an emergency or unexpected site conditions are identified, the individuals and organizations listed in Table 2 will be contacted.

<table>
<thead>
<tr>
<th>Agency/Organization</th>
<th>Name</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureau of Reclamation</td>
<td>Joe Liebhauser</td>
<td>(702) 293-8130</td>
</tr>
<tr>
<td>Bureau of Reclamation</td>
<td>Marc Maynard</td>
<td>(702) 293-8344</td>
</tr>
<tr>
<td>Bureau of Reclamation</td>
<td>Gerry Hickman</td>
<td>702-293-8346</td>
</tr>
<tr>
<td>Clark County Parks and Recreation</td>
<td>Elsie Sellers</td>
<td>(702) 318-1715</td>
</tr>
<tr>
<td>Clean Water Coalition</td>
<td>Doug Karafa</td>
<td>(702) 319-4433 x-222</td>
</tr>
<tr>
<td>Clean Water Coalition</td>
<td>Jim Devlin</td>
<td>(702) 319-4433 x-221</td>
</tr>
<tr>
<td>Clean Water Coalition</td>
<td>Jerry Kipp</td>
<td>(702) 319-4433 x-229</td>
</tr>
</tbody>
</table>
Appendix A

Cacti and Yucca Salvage Protocols
1.0 INTRODUCTION

The Clean Water Coalition (CWC) is seeking to release Requests for Bids and create contract documents to begin construction activities for the Systems Conveyance and Operations Program (SCOP). In order to provide an accurate description of the work that will be required the CWC has requested that PBS&J provide an estimate of the number of cacti plants that will require salvage for the entire SCOP alignment, as well as provide guidance on the procedures for salvage, maintenance, and transplant of cacti and yucca.

The salvage and transplanting of cacti and yucca for the SCOP project is required by the United States (US) Fish and Wildlife Service (FWS) and is a condition of the Incidental Take Permit issued under Section 7(c) of the Endangered Species Act (Biological Opinion [BO] File No. 1-5-07-F-433). In order to implement Reasonable and Prudent Measure Number 7 of the Biological Opinion the CWC will ensure that prior to construction; cacti and yucca to be impacted by project activities will be excavated and transplanted as part of the restoration in accordance with National Park Service (NPS) and US Bureau of Reclamation (Reclamation) standards.

2.0 ESTIMATION OF CACTI THAT REQUIRE SALVAGE

Relative densities were used to calculate the approximate number of cacti and yucca that will require salvaging. No yucca species were encountered during the 2007 biological surveys. However, if any yucca plants occur along portions of the SCOP alignment that were not surveyed in 2007, then these will also need to be salvaged. Table 1 shows the species and numbers of cacti that were recorded.

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Number Observed (2007 Surveys)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cottontop Cactus</td>
<td>Echinocactus polyephalus</td>
<td>3</td>
</tr>
<tr>
<td>Beavertail Cactus</td>
<td>Opuntia basilaris</td>
<td>741</td>
</tr>
<tr>
<td>Silver Cholla</td>
<td>Opuntia echinocarpa</td>
<td>32</td>
</tr>
<tr>
<td>Pencil Cactus</td>
<td>Opuntia rosostisma</td>
<td>5</td>
</tr>
<tr>
<td>Barrel Cactus</td>
<td>Ferocactus cylindraceus</td>
<td>84</td>
</tr>
<tr>
<td>Fishhook Cactus</td>
<td>Mammillaria tetrancisra</td>
<td>8</td>
</tr>
</tbody>
</table>
Based upon the field surveys conducted for the SCOP project in 2007, there are two distinct areas with different densities of cacti within the overall alignment. Area 1 has a lower density of approximately 2 cacti per acre and consists of the portion of the alignment that is along the Las Vegas Wash, Reach 2 and Reach 3. Area 2 has a higher density of cacti of approximately 4 cacti per acre and consists of the portion of the alignment that is in the River Mountains and within Lake Mead National Recreation Area. Each of the project components that will result in surface disturbance was assigned a 1 or a 2 based upon which area they are located in. Table 2 lists the project components that were considered and calculations for each area. All of the previously disturbed/developed areas and the areas that are below high lake level were excluded from the acres of disturbance because these areas do not contain cacti or yucca plant species. The total approximate number of cacti that will need to be salvaged is 403.

Table 2. Approximate Number of Cacti per Project Component

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Acres of Disturbance (Temporary and Permanent Right of Way)*</th>
<th>Density Area (1 or 2)</th>
<th>Density (estimated # of cacti per acre)*</th>
<th>Approximate # of Cacti to Salvage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach 2 Cut and Cover Pipeline</td>
<td>38.5</td>
<td>1</td>
<td>2</td>
<td>77</td>
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<tr>
<td>Reach 3 Cut and Cover Pipeline</td>
<td>24.2</td>
<td>1</td>
<td>2</td>
<td>48.4</td>
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<tr>
<td>City of Henderson Foreman</td>
<td>19.8</td>
<td>1</td>
<td>2</td>
<td>39.8</td>
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<tr>
<td>Magic Way Temporary Haul Rd</td>
<td>2.2</td>
<td>1</td>
<td>2</td>
<td>4.4</td>
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<tr>
<td>El Terminus Temporary Power</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Reach 3 Staging Area</td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Effluent Interceptor Terminus and Staging Area</td>
<td>40</td>
<td>1</td>
<td>2</td>
<td>80</td>
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<tr>
<td>North River Mountains Tunnel 3 (NRMT3) – West Staging Area (Reclamation)</td>
<td>3</td>
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<tr>
<td>NRMT3 - East Staging Area (NPS)</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Hydroelectric/Pressure Regulating Station (HPRS) Site and Staging</td>
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<td>4</td>
<td>40</td>
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<tr>
<td>HPRS Access Road</td>
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<td>2</td>
<td>4</td>
<td>0</td>
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<tr>
<td>Electrical Ductbanks connecting the HPRS to Existing Colorado River Commission Ductbanks</td>
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<td>Electrical Ductbank and Water Lines from the HPRS to Alfred-Merritt Smith Water Treatment Facility</td>
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<tr>
<td>NPS Construction Staging Area</td>
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<td>40.8</td>
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<tr>
<td>Lake Conveyance System Cut and Cover Pipeline</td>
<td>7.5</td>
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<td>NPS Temporary Haul Roads</td>
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<tr>
<td>Excavated Material Stockpiles</td>
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<td>Public Boat Ramp and Parking Lot</td>
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<td>Pyramid Island Causeway Expansion</td>
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<tr>
<td>Original SCOP Environmental Impact Study Staging Areas</td>
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<td>1</td>
<td>2</td>
<td>14.8</td>
</tr>
</tbody>
</table>

Total Number of Cacti to be Salvaged: 403

* Numbers are rounded. Excludes areas devoid of cacti.

3.0  CACTI AND YUCCA SALVAGE PROTOCOLS

According to the Terms and Conditions of the BO (USFWS 2007), cacti and yucca will be salvaged according to the NPS and Reclamation standards. These agencies were contacted on March 18, 2008 to obtain written copies of the standards that will be implemented during SCOP construction activities. Both NPS and Reclamation responded that they do not have formal, written standards and so have determined...
that they will most likely adopt BLM’s protocol as their own. However, they will still need to review and approve protocols and procedures developed by the CWC specific for the SCOP project. All state permitting requirements and regulations will apply to the salvage of cacti and yucca during SCOP construction activities.

The following are provided as general guidelines. These guidelines are representative of the standards for cacti and yucca salvage that have been previously implemented on projects that occur on federal lands. These guidelines may be subject to change pending approval from the NPS and Reclamation. The following protocols were developed from standards for cacti and yucca salvage on lands administered by the US Bureau of Land Management (BLM) (BLM 1999 and BLM 2001) (see Attachment A and B).

The following types of cacti and yucca are required to be salvaged:

- all barrel cactus;
- all cottontop cactus;
- all hedgehog cactus;
- all yucca over 1-foot tall, including Joshua trees, Mojave yucca, banana yucca, soaptree yucca;
- all cholla cacti under 3-feet tall.

Yucca less than one-foot tall and cholla cacti (staghorn, silver, etc.) over three feet tall do not need to be salvaged. These plants that are not required to be salvaged will instead become a part of the “vertical mulch”. All other cacti, regardless of size, will be salvaged.

Prior to any surface disturbance, the project site must be surveyed for yucca and cacti by a qualified biologist paid for by the project proponent. The surveyor must provide a list of numbers of cacti and yucca by species that are observed during the surveys.

Prior to any disturbance, the cacti and yucca plants that will be impacted by construction activities will be appropriately salvaged. It is ideal to perform the salvage during cooler months (November through March) but transplanting cacti and yucca to a nursery can occur at any time of the year. Yucca and cacti are very shallow-rooted and thus easy to remove. Plants should be excavated by digging out the roots around the base of each plant. Occasionally some roots may be damaged during this process. Damaged roots can be dusted with sulfur or cinnamon to cut down on pathogens and increase plant survival (Bainbridge 2007). Cacti and yucca should be transplanted to the nursery site within 48 hours of salvage. In particular, Joshua trees are sensitive to being moved. Barrel cacti and Joshua trees require that the north side of the plant be identified and marked using flagging or other marking. These two species need to be planted in the same orientation as they were originally growing in order to survive. Other succulents do not require planting in a specific orientation. Clonal (clumped) yucca can be salvaged as separate plants with great success (each has its own root system). Clonal cacti may not be salvaged as separate plants.

A front-end loader or other heavy equipment is necessary for the larger plants. Smaller plants may be excavated by hand (with shovels or other appropriate hand tools) or with smaller equipment, such as a Bobcat.

4.0 SALVAGED PLANTS NURSERY

Prior to any ground disturbance, an organized, accessible and secure nursery site of appropriate size will be identified and established. This nursery shall provide ease of care and maintenance for the plant material. Site-specific nursery requirements may be applicable but should be designed to minimize any
additional disturbance to the project site. All salvaged plant material shall be replanted in vertical trenches that have been excavated to the same depth that the salvaged plants were originally growing. Yuccas should be planted with 1 foot spacing. All yucca and Joshua trees will be dug bareroot and replanted within 24 hours at the nursery site. Yucca clusters will be broken into individual stems prior to replanting at the nursery. All cacti will be planted with the same north orientation as they originally grew (+/- 15 degrees). All small cacti shall be watered thoroughly one time upon being replanted to the nursery. All yucca stems will be watered in initially with DRIWATER® being applied at a rate of one quart for every foot in height. DRIWATER® cartons are to be buried completely. A one time watering approximately fifteen days after planting shall occur to remove or minimize any air pockets and assure proper soil compaction. Care should be taken to properly compact all soil around roots of plants that are directly transplanted in the nursery. Cacti and yucca can be maintained in high densities in a nursery for up to two years with a high survival rate.

5.0 TRANSPLANTING PROTOCOLS

All salvaged plant material shall be replanted in a natural pattern to depth that is equivalent to the same depth that the salvaged plants were originally growing. Mojave yuccas will be re-planted in groups of three. All cacti will be planted with the same north orientation as they originally grew (+/- 15 degrees). All small cacti shall be watered thoroughly one time upon being transplanted into the field. All yucca stems will be thoroughly watered initially and DRIWATER® will be applied at a rate of one quart for every foot in height. DRIWATER® cartons are to be buried completely. A one time watering approximately fifteen days after planting shall occur to remove or minimize any air pockets and assure proper soil compaction. Care should be taken to properly compact all soil around roots of plants that are directly transplanted in the nursery. Extra planting effort will be applied to closing temporary access roads as directed by BLM. Transplanting and maintenance of plant material will be done such that 80 percent survivorship after one year is achieved.

6.0 ADDITIONAL INFORMATION

Since it is required that salvage operations are coordinated by a qualified biologist, the most efficient way of conducting the salvage operations is to have it done concurrent with the desert tortoise clearance surveys. According to the Terms and Conditions of the SCOP BO desert tortoise clearances are required one day prior to the initial ground disturbing activities. In addition to this, a qualified biologist or monitor is required to be present for all ground disturbing activities within desert tortoise habitat for the duration of construction (the exact number of biologists/monitors is dependant on the number of earth-moving pieces of equipment and the time of year). Typically, the way that has been conducted on previous projects is that a separate salvage company is hired to perform the salvage but only conducts the work under the supervision of a qualified biologist. Therefore the sole responsibility of this company is to excavate and transplant the cacti and to set up the nursery. There are two companies within the Las Vegas valley that specialize in plant salvage. This way, all the salvage can be conducted at once, and an authorized biologist will accompany the salvage crew to monitor ground disturbing activity and simultaneously conduct the desert tortoise clearance of the area.

PBS&J has coordinated and conducted these services and also possesses all the necessary U.S. Fish and Wildlife Service approvals to conduct this work. If requested, PBS&J can assist the CWC with getting the necessary permits, coordinating salvage operations, and providing desert tortoise clearance and monitoring services for SCOP activities.
7.0 REFERENCES


ATTACHMENT A

Standard Operating Procedures for the Salvage, Transportation and Care of Cacti and Yucca on BLM Land

April 2008
March 15, 1999

Standard Operating Procedures for the Salvage, Transportation, and Care of Cacti and Yucca on BLM Land

Introduction: Salvaging cacti and yucca from projects that will permanently disturb public land has become standard policy in the Las Vegas Field Office. This policy has had strong support from the general public, who are aware of the high market value of these plants. The following summarizes the necessary procedures for salvaging plants from public lands in the Las Vegas Field Office. This document was developed to guide project managers of BLM-authorized actions in the evaluation, removal, transportation, and care of desert plants that are impacted by the project. Types of lands actions that may require salvage of desert cacti and yucca include, but are not limited to, rights-of-way, recreation and public purpose lands, detention basins, leases, and gravel pits. Because salvaging desert plants is time-consuming and expensive, the following guidelines will be used for determining which plants require salvaging:

- all barrel cactus must be salvaged;
- all cottontop cactus must be salvaged;
- all hedgehog cactus must be salvage;
- all yucca over 1-foot tall, including Joshua trees, Mojave yucca, banana yucca, soaptree yucca must be salvaged;
- all other cacti over 1-foot tall or over 1-foot wide (including prickly pear) must be salvaged;
- cacti and yucca less than one-foot tall and cholla cacti (staghorn, silver, etc.) do not need to be salvaged.

Authority: Salvaging desert vegetation in Nevada is regulated by the State of Nevada Division of Forestry (NDF) under the statutes NRS 527.050 - 527.110. The BLM coordinates all plant salvages on public lands with the State. See Attachment 1 for a summary of these statutes. The BLM is authorized to salvage vegetation on public lands under 43 CFR 5400 and BLM Manual 5000-1 (10/28/91).

Evaluation: Prior to any disturbance, the project site must be surveyed for yucca and cacti by a qualified biologist paid for by the project proponent. The surveyor must provide a list of numbers of yucca and cacti by species. If hundreds of plants are known to occur, an estimate may be provided based on counting plants within a specific area (e.g., 0.1 mile) and then calculating the entire area to be disturbed. A copy of the evaluation needs to be forwarded to the BLM forestry staff.

Salvage: Prior to any disturbance, the cacti and yucca which will be impacted will be appropriately salvaged. Cooler months are best for salvage, but removal can occur at any time of the year. Yucca and cacti are very shallow-rooted and thus easy to remove. Cacti do not require being planted immediately. One or two weeks drying-time will decrease the chance for root infection, especially if the roots become damaged during digging. Yuccas do require immediate transplanting. In particular, Joshua trees are sensitive to being moved. Barrels and Joshua trees require that the north side of the plant be identified and marked, using flagging or other marking. These two species need to planted in the same orientation as they were originally growing in
order to survive. Other succulents don't seem to care about orientation. A front-end loader or other heavy equipment is necessary for the larger plants. Clonal (clumped) yucca can be salvaged as separate plants with great success (each has its own root system).

Transportation and Care: Before transporting the plants, the contractor must get a shipping permit from BLM. The BLM has a stockpiling facility for salvaged material at the Desert Tortoise Conservation Center (DTCC). The plant material taken there is used for restoration projects elsewhere in the district. Cacti and yucca that will be immediately taken to the DTCC can be transported bare-root without potting them beforehand. They should be loaded upright onto a flatbed trailer, transported to the DTCC, placed in one of the trenches located at the facility, and backfilled. The BLM will water and maintain the plants until they can be used for restoration. The DTCC is not open to the general public; the hours are 7:00 am to 1 pm, Monday through Friday. Twenty-four hours notice must be given to the BLM before the plants are transported in order for BLM to coordinate with the staff at the DTCC. Directions to the DTCC are provided in Attachment 2.

Compliance Checks: The BLM will evaluate whether proper salvage has been done for a project. Cost recovery charges for lost or destroyed cacti and yucca will be applied at fair market value. In addition, staff time and vehicle costs for non-compliance will be added.

Questions: Any questions or problems will be resolved through the Forestry staff at BLM. Please contact the BLM botanist at 515-5000.