

RESOLUTION NO. 929**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SANTA ANA RIVER WATER RIGHT APPLICATIONS FOR SUPPLEMENTAL WATER SUPPLY**

WHEREAS, San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County have filed two separate applications (Application Nos. 31165 and 31370) with the State Water Resources Control Board to divert and put to beneficial use a total of up to 200,000 acre-feet of water per year from the Santa Ana River (the "Project");

WHEREAS, a Notice of Preparation for a Draft Environmental Impact Report ("Draft EIR") was prepared and released for public comment on July 12, 2002;

WHEREAS, the release of the Notice of Preparation initiated a 30-day public comment period that ended on August 31, 2002. During the public review period, a public scoping meeting was held on August 6, 2002, to receive agency and public comments regarding the scope of the environmental analysis for the EIR;

WHEREAS, a Draft EIR was prepared and circulated for public review and comment between October 14, 2004 and January 7, 2005;

WHEREAS, San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County received written comments on the Draft EIR from organizations and public agencies;

WHEREAS, a Final Environmental Impact Report ("Final EIR") that incorporated the Draft EIR by reference and provided responses to public comments was prepared and distributed to the public on January 22, 2007; and

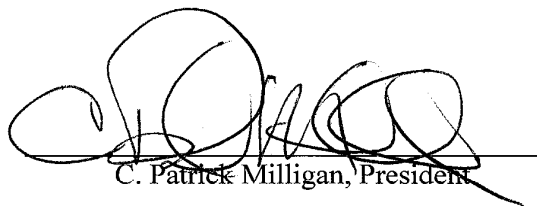
WHEREAS, San Bernardino Valley Municipal Water District discussed the Final EIR during its meeting on March 21, 2007 and provided the opportunity for the public to give comments on the Final EIR during that meeting;

NOW, THEREFORE, San Bernardino Valley Municipal Water District resolves as follows:

1. The Final EIR is hereby certified as being completed in compliance with the provisions of the California Environmental Quality Act and its implementing regulations.
2. The Final EIR was presented to the Board on January 22, 2007 and the Board discussed the contents of the Final EIR during its meeting on March 21, 2007.
3. The Board has reviewed and considered the information contained in the Final EIR prior to taking any action to approve or disapprove the Project.

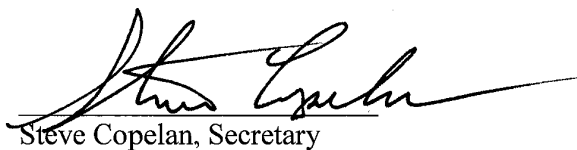
4. Save as expressly modified in the Findings attached to Resolution No. 930, the Board hereby ratifies and adopts the conclusions of the Final EIR. The Final EIR represents the independent judgment and analysis of the Board.

ADOPTED this 21st day of March, 2007.



C. Patrick Milligan, President

ATTEST:



Steve Copelan, Secretary

(SEAL)

RESOLUTION NO. 930**A RESOLUTION OF THE BOARD OF DIRECTORS OF SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT ADOPTING FINDINGS AND THE MITIGATION MONITORING AND REPORTING PLAN, AND APPROVING THE SANTA ANA RIVER WATER RIGHT APPLICATIONS FOR SUPPLEMENTAL WATER SUPPLY**

WHEREAS, San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County have filed two separate applications (Application Nos. 31165 and 31370) with the State Water Resources Control Board to divert and put to beneficial use a total of up to 200,000 acre-feet of water per year from the Santa Ana River (the "Project");

WHEREAS, a Notice of Preparation for a Draft Environmental Impact Report ("Draft EIR") was prepared and released for public comment on July 12, 2002;

WHEREAS, the release of the Notice of Preparation initiated a 30-day public comment period that ended on August 31, 2002. During the public review period, a public scoping meeting was held on August 6, 2002, to receive agency and public comments regarding the scope of the environmental analysis for the EIR;

WHEREAS, a Draft EIR was prepared and circulated for public review and comment between October 14, 2004 and January 7, 2005;

WHEREAS, San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County received written comments on the Draft EIR from organizations and public agencies;

WHEREAS, a Final Environmental Impact Report ("Final EIR") that incorporated the Draft EIR by reference and provided responses to public comments was prepared and distributed to the public on January 22, 2007;

WHEREAS, San Bernardino Valley Municipal Water District discussed the Final EIR during its meeting on March 21, 2007 and provided the opportunity for the public to give comments on the Final EIR during that meeting;

WHEREAS, the Board has, by means of Resolution No. 929, certified that the EIR has been prepared in full compliance with the terms of the California Environmental Quality Act;

WHEREAS, the Board has determined that the Project will result in the following benefits: (i) increased water supply reliability, (ii) expanded operational flexibility, (iii) additional cooperative water management, (iv) putting additional water to beneficial use, and (v) improved water quality;

WHEREAS, the Board has made written findings for each significant effect of the Project, and the Board has determined that the benefits of the Project outweigh any significant and unavoidable impacts on the environment, as stated in the Board's Statement of Overriding Considerations;

WHEREAS, the Board wishes to approve the Findings document, which includes the Statement of Overriding Considerations;

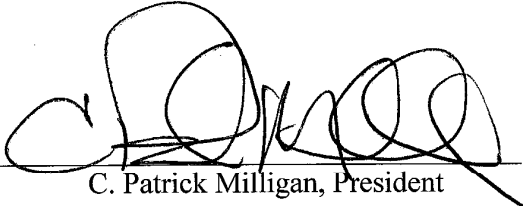
WHEREAS, the Board wishes to approve the Mitigation Monitoring and Reporting Plan, which includes all mitigation measures designed to substantially lessen or eliminate the Project's adverse impacts on the environment, as well as a plan for reporting obligations and procedures by parties responsible for implementation of the mitigation measures; and

WHEREAS, in light of the Board's findings regarding the Project's benefits and adverse impacts on the environment, the Board wishes to approve the Project;

NOW, THEREFORE, the Board of Directors of San Bernardino Valley Municipal Water District resolves as follows:

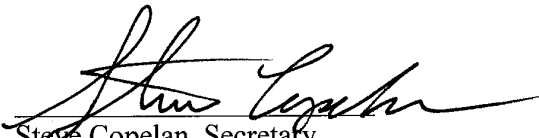
1. The Board hereby approves and adopts the Findings attached hereto as Attachment A, which are incorporated herein, pursuant to CEQA Guidelines §§ 15091, 15092 and 15093.
2. The Board hereby approves and adopts the Mitigation Monitoring and Reporting Plan, which is attached hereto as Attachment B and incorporated herein by reference.
3. The Board hereby approves the Project.
4. The Board hereby directs staff to take all other actions that may be necessary to divert water from the Santa Ana River, including, but not limited to, seeking appropriate regulatory permits.

ADOPTED this 21st day of March, 2007.



C. Patrick Milligan, President

ATTEST:



Steve Copelan, Secretary

(SEAL)

RESOLUTION 2468

RESOLUTION OF THE BOARD OF DIRECTORS OF
WESTERN MUNICIPAL WATER DISTRICT OF
RIVERSIDE COUNTY CERTIFYING THE FINAL
ENVIRONMENTAL IMPACT REPORT FOR THE SANTA
ANA RIVER WATER RIGHT APPLICATIONS FOR
SUPPLEMENTAL WATER SUPPLY

WHEREAS, Western Municipal Water District of Riverside County and San Bernardino Valley Municipal Water District have filed two separate applications (Application Nos. 31165 and 31370) with the State Water Resources Control Board to divert and put to beneficial use a total of up to 200,000 acre-feet of water per year from the Santa Ana River (the "Project");

WHEREAS, a Notice of Preparation for a Draft Environmental Impact Report ("Draft EIR") was prepared and released for public comment on July 12, 2002;

WHEREAS, the release of the Notice of Preparation initiated a 30-day public comment period that ended on August 31, 2002. During the public review period, a public scoping meeting was held on August 6, 2002, to receive agency and public comments regarding the scope of the environmental analysis for the EIR;

WHEREAS, a Draft EIR was prepared and circulated for public review and comment between October 14, 2004 and January 7, 2005;

WHEREAS, Western Municipal Water District of Riverside County and San Bernardino Valley Municipal Water District received written comments on the Draft EIR from organizations and public agencies;


WHEREAS, a Final Environmental Impact Report ("Final EIR") that incorporated the Draft EIR by reference and provided responses to public comments was prepared and distributed to the public on January 22, 2007; and

WHEREAS, Western Municipal Water District of Riverside County discussed the Final EIR during its meeting on March 21, 2007 and provided the opportunity for the public to give comments on the Final EIR during that meeting;

NOW, THEREFORE, the Board of Directors of Western Municipal Water District of Riverside County resolves as follows:

1. The Final EIR is hereby certified as being completed in compliance with the provisions of the California Environmental Quality Act and its implementing regulations.
2. The Final EIR was presented to the Board on January 22, 2007 and the Board discussed the contents of the Final EIR during its meeting on March 21, 2007.
3. The Board has reviewed and considered the information contained in the Final EIR prior to taking any action to approve or disapprove the Project.
4. Save as expressly modified in the Findings attached to Resolution No. 2469, the Board hereby ratifies and adopts the conclusions of the Final EIR. The Final EIR represents the independent judgment and analysis of the Board.

ADOPTED this 21st day of March, 2007.



Donald D. Galleano,
President

ATTEST:



John V. Rossi
Deputy Secretary-Treasurer

(SEAL)

RESOLUTION 2469

A RESOLUTION OF THE BOARD OF DIRECTORS
OF WESTERN MUNICIPAL WATER DISTRICT OF
RIVERSIDE COUNTY ADOPTING FINDINGS AND
THE MITIGATION MONITORING AND REPORTING
PLAN, AND APPROVING THE SANTA ANA RIVER
WATER RIGHT APPLICATIONS FOR SUPPLE-
MENTAL WATER SUPPLY

WHEREAS, Western Municipal Water District of Riverside County and San Bernardino Valley Municipal Water District have filed two separate applications (Application Nos. 31165 and 31370) with the State Water Resources Control Board to divert and put to beneficial use a total of up to 200,000 acre feet of water per year from the Santa Ana River (the "Project");

WHEREAS, a Notice of Preparation for a Draft Environmental Impact Report ("Draft EIR") was prepared and released for public comment on July 12, 2002;

WHEREAS, the release of the Notice of Preparation initiated a 30-day public comment period that ended on August 31, 2002. During the public review period, a public scoping meeting was held on August 6, 2002, to receive agency and public comments regarding the scope of the environmental analysis for the EIR;

WHEREAS, a Draft EIR was prepared and circulated for public review and comment between October 14, 2004 and January 7, 2005;

WHEREAS, Western Municipal Water District of Riverside County and San Bernardino Valley Municipal Water District received written comments on the Draft EIR from organizations and public agencies;

WHEREAS, a Final Environmental Impact Report ("Final EIR") that incorporated the Draft EIR by reference and provided responses to public comments was prepared and distributed to the public on January 22, 2007;

WHEREAS, Western Municipal Water District of Riverside County discussed the Final EIR during its meeting on March 21, 2007 and provided the opportunity for the public to give comments on the Final EIR during that meeting;

WHEREAS, the Board has, by means of Resolution No. 2468, certified that the EIR has been prepared in full compliance with the terms of the California Environmental Quality Act;

WHEREAS, the Board has determined that the Project will result in the following benefits: (i) increased water supply reliability, (ii) expanded operational flexibility, (iii) additional cooperative water management, (iv) putting additional water to beneficial use, and (v) improved water quality;

WHEREAS, the Board has made written findings for each significant effect of the Project, and the Board has determined that the benefits of the Project outweigh any significant and unavoidable impacts on the environment, as stated in the Board's Statement of Overriding Considerations;

WHEREAS, the Board wishes to approve the Findings document, which includes the Statement of Overriding Considerations;

WHEREAS, the Board wishes to approve the Mitigation Monitoring and Reporting Plan, which includes all mitigation

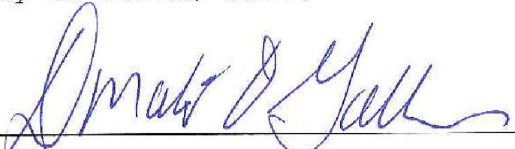
measures designed to substantially lessen or eliminate the Project's adverse impacts on the environment, as well as a plan for reporting obligations and procedures by parties responsible for implementation of the mitigation measures; and

WHEREAS, in light of the Board's findings regarding the Project's benefits and adverse impacts on the environment, the Board wishes to approve the Project;

NOW, THEREFORE, the Board of Directors of Western Municipal Water District of Riverside County resolves as follows:

1. The Board hereby approves and adopts the Findings attached hereto as Attachment A, which are incorporated herein, pursuant to CEQA Guidelines §§ 15091, 15092 and 15093.
2. The Board hereby approves and adopts the Mitigation Monitoring and Reporting Plan, which is attached hereto as Attachment B and incorporated herein by reference.
3. The Board hereby approves the Project.
4. The Board hereby directs staff to take all other actions that may be necessary to divert water from the Santa Ana River, including, but not limited to, seeking appropriate regulatory permits.

ADOPTED this 21st day of March, 2007.



Donald D. Galleano,
President

ATTEST:



John V. Rossi
Deputy Secretary-Treasurer

(SEAL)

FINDINGS

SANTA ANA RIVER WATER RIGHT APPLICATIONS FOR SUPPLEMENTAL WATER SUPPLY

I. INTRODUCTION

4-N aB- B UNH -2a N3U-2g -5aB USB35 NU-N g aVaBN N3U-2g -5aB USB35 HXRpaBWA H N5 g aVaBN 3H2a35pa2 Nug aVaBN -B B/ UN-2 -5aB-/ aNBaW5e-5 -N/ a/ BH N -5aB-N WBK3a -5aBW112aWON4-N aB- B UNH-N RpaBWA 3H N5aWON 4H 5eaBN -2XBNU Nug aVaBNe-pa X2aI -5aBB/e5-1123-SUNW Ue 5ea 45-5a g -5aB RaWl BaW HNB2 HB 4g R SHI paB5-N 1 5SH aNaX3U2 W- 5B-2HX 1 SH -3B Xa5HX -5aB1aB a-B -X XBH 5ea 4-N5 , N RpaB 4, R 5ea BHa35 ea BHa35 3HNW5HX-2I U5B5UN-B -35UNWNa3aWVB SH3HNWpa I paB5 3HNpa -N VHB 5eUW -5aB XBH 5ea 4, R XB aNaX3U2 W UN2 I UN 5ea 3HNW 35UNHXNa X3U5aW5ea HlaB SUNHX Na -N a USUN X3U5aW-N -2B/ 2-5B 1aB USUN B UBI XBW3e 3HNW 35UN-N HlaB SUNW

ea BHa35UNWNaI SH-3elapa 5ea XZH UN H a35paW

- TNB-W -5aBW112 B2U U5 BI 3UN IalaNaNa HNU 1HBaI -5aB
- apa2HI -N Ia2paB- Na 2B-2 eUe -25 2N 5aB -5aBW112 5e-5UNNaI aI SH aa51-BHX-N3U-5aI X5 B Ia -N W-N
- S 1-N HlaB SUN-2Xa UU5 -II UN UNB VB 35 B -N p-B UN Wl BaWX -5aB 5eaB 1BpUUN Nug aVaBN Ue / B-5aB3-1- U5 SH -Se p-B UN W112 -N Ia -N

NU-N g aVaBN aB He 3B-5aI UN SH-II BAW5ea U -2Nba a5 aaN-p-U-2a -5aB W112aW-N 5ea Ia -N WX- / BH UN 1HI 2-SUNUN5ea TN-N S 1UB -B- HX4H 5eaBN -2XBNU 1BpUUN eH2aW2a U 1HBaI -5aB5HB5-UW112aBW NueH2 W 3HNB 35XB -5aBXBH 5ea 45-5a g -5aB BHa35 4g , W a aB-/ aNB HX5ea aSHIH25-Ng -5aB USB35HX4H 5eaBN -2XBNU aSHIH25-N g aVaBNB3aupaWU 1HBaI -5aBXBH He 5ea 4g -N H2BIHRpaB TN-II UN5HU 1HBUN WBK3a -5aB5H5ea B/ UN Nug aVaBN -B BWHNW2a XB -N/ UN 5ea HlaB SUNHX/ BH N -5aB -WUNUN2 I UN 5ea 4-N aB- B UNH -W, B- 4 , / BH N -5aB -WUN Ue UN5eaUBaWa35pa WpUa -B- Wl BW-N5H5ea I/ aN5WUNOrange County Water District v. City of Chino et al. -W H , 1B2 Orange County I/ aN5 -N Western Municipal Water District of Riverside County v. East San Bernardino County Water District, -W H , 1B2 Western I/ aN5

ea Orange County -N Western I/ aN5WB3HNUaI 5e-5X5 B 1HI 2-SUN/ BH 5e UN5ea TN-N S 1UB H 2 B UB Na -5aBW112aW MB5eUBa-WN 5ea Orange County I/ aN5 -5eHBaW Nug aVaBN5H aN-/ a UN NU UaI -5aB3HNWp-SUN-35paUaWUN2 I UN Wl-IUN U 1H N UN -N HeaB a5eH W ea Western I/ aN5-2M3HN5a 12-5aW5e-5

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW -Be

Nug aVaN U23HNB 35Na HB W-N X3U5aW5e-5 U2B3e-Ba / BH N -5aB -WNW TN
5eaW - W5ea BHa35UWNaXHB SHU 12a aN55ea I/ aN5W

II. PROJECT DESCRIPTION

ea BHa35 H 2 3-15 Ba -5aBXH 5ea 4-N5 , N- RUpaB-N 1 55e-5 -5aB5HB-WN 2a -N
aNax3U2 W UN5ea Nug aVaN WpUa -Ba- 5eBH / e I U235 W / BH N -5aB3e-Ba HB
a 3e-Na Nug aVaN e-pa 5ea - U5 SH3HB UN 5a 5ea W HX -5aB3HNpa -Nba X3U5aW HN
- 2B-2-N Ba/ UN-2 -WW Nug aVaN IHN51BH HMW SHa 1H5 -5aBXB W H SWa 5ea UB
WpUa -Ba- W , N -5aB3HNpa aI H SWa 5ea WpUa -Ba- W H 2 a B5 BaI pU a 3e-N a -W
WHN-WB353-2

S UNW X3U5aW H 2 a Wl SH5ea a 5aN51HMW2a SHI pab-N 3HNpa Na 2 -11BHIB5aI
-5aBXH 5ea 4-N5 , N- RUpaB BHa35 Ba2 5aI X3U5aW H 2 a IaW NaI SH3HNba35a UNW
X3U5aW Ue Na HB H UaI X3U5aW W5e-5W112a aN5-2 -5aBW112aW3-N a aX3UaN2
Wl SH aa52B-2NaI W a 1BHa35 Ba2 5aI X3U5aW H 2 a 3HNB 35aI HBa UNW HNaw
H UaI UNXH B-Ba- WUaN5UaI a2H

- ◆ ea 4apaN - W - -N RaWpHUB HNB 35UN, Ba- UN2 IaW HI U3-5UNHX5ea
UN5 a VB 35 Ba HX4apaN - W - -N Ba2B-5UNHX5ea -33aWBF-I WpUN 5ea UN5 a
VB 35 Ba
- ◆ ea 4-N5 , N- RUpaB HNB 35UN, Ba- UN2 IaW5ea 2 Na H2 H MH HNa35HB
-N H5HN -N HN HNa35BTI1Ua2NaW , 2HX5eaW -Ba Na X3U5aW-N -Ba
2B-5aI -55ea H 5e HX5ea 4-N5 , N- RUpaB3-N HN
- ◆ ea apU -N HN HNB 35UN, Ba- UN2 IaW5ea Na apU -N HN -WW Ua2Na
- ◆ ea H aB 5a Ba HNB 35UN, Ba- UN2 IaW5ea Na H aB 5a Ba Ua2Na
-N -35 W -WNW Ua2Na

, aB21eHH B leWWH UN 5ea 2B-5UNWX5eaW X3U5aW Ba XI N -5MU BaW SH HX5ea
B XSTR

III. ENVIRONMENTAL REVIEW OF THE PROJECT

BW-N5H5ea -2XBNJ SNpUHN aN5-2 -25 , 35 23 RaW BaW H a et seq
-N 5ea S , / Ua2NaW -2 H a Ra/ W U et seq. 3H2a35p2 S , -N
STR -W Ba1-BaI SH-N2 a 5ea aNpUHN aN5-2aX35WHX5ea BHa35 ea B XSTR -W
3UB 2 5aI XBI 23 BpIa -N 3H aN5-N -33HB -Nba Ue S , MB1 BHWWHX S ,
Nug aVaN -Ba 3H 2a-I -/ aN5aWXB5ea STR

Nug aVaN 3HN 35aI - 5eBH / e 1 23 H 5a-3e aXBI BN 5ea aNpUHN aN5-2BpIa
1BbaWW ea UN5U2Ia3UWHN SH1Ba1-Ba -NSTR XB5ea BHa35 -W -Ia X2H UN 3H 12a5UNHX
-N TN5U245 I , H3a HX Ba1-B 5UN UN2 I UN 5ea UN5U2W I -W UN5U 5aI SH
5ea -2XBNJ 45 5a 2a-BN eH W -N H5eaB1H5aN5U2 UN5aBaV5aI 1-B5aWON 2 ea
Ba2a-W HX5ea UN5U5aI - I- 1 23 3H aN51aBH 5e-5aN aI HN, / W

MN UN WE STR XB4-N5 , N- RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

BN 5a 1 23 Bpda 1aBH - 1 23 WHIUN aa5UN - Wea2 UN5a 5 HX4-N
 aB-B UNHN, / W SHB3aupa -/aB -N 1 23 3H aNWB/-B UN 5a WHIa HX5a
 aNpUN aN5-2-N-2 WXB5ea STR H aNWN5ea -N TN5U245 I aB B3aupaI XH
 W 5a -/aN5aWB/ UN-2-N 2B-2/HpaBN aN5-2-/aN5aWB/ UN-2- 5eHB5aW-N NN
 /HpaBN aN5-2HB-NU-5UNW NUg aVABN3HNW aB I 5a 3H aNWB3aupaI UNB5UNW 5a
 WHIa HX-N-2 WXB5ea STR

ea BXSSTR -W2a-WI UN 3SH aBH Xe - I- Bpda 1aBH 1 BW-N5H S ,
 Wa2NaW ea Bpda 1aBH HB/UN-2 WeaI 2I SH2HW HN a3a aB -W
 a 5aN aI 5H a3a aB -N a 5aN aI -/UNSH -N NUg aVABNeaI 5ea
 XZH UN 1 23 H 5a-3e aa5UN WN5ea BXSSTR

Public Meetings Held During the CEQA Process

Date	Event
, / W	43HIUN aa5UN -5 -5UN-2 BN a 4eH
a3a aB	aa5UN Xe 45-5a g -5aBRaWI BaW HNB2 H B
Hpa aB	aa5UN Xe 5ea 5 HXR(paB)W a
Hpa aB	aa5UN Xe 5ea -2XHNJ aI-B5 aN5HXMW - a aa5UN Xe S2WNB -2a g -5aB USE35
Hpa aB	23 aa5UN HN BXSSTR -5g aVABN
Hpa aB	23 aa5UN HN BXSSTR -5 NU aa5UN Xe HB-241HNWBW BN a HN5 MHI HNB2 USE35 R(paB)W a HN5 MHI HNB2-N g -5aB HNWB-SUN USE35-N 4-N aB-B UNH HN5 MHI HNB2 USE35
a3a aB	aa5UN Xe 45-5a g -5aBRaWI BaW HNB2 H B
a3a aB	aa5UN Xe 4 MBW4apUa
a3a aB	aa5UN Xe 4 MW g U 2X 4apUa 11aB4-N5, N R(paB)g -5aBRaWI BaW, WBU5UN
a3a aB	aa5UN Xe 4, B HBI WHXSN UNaBW
M B-B	aa5UN Xe 5ea -2XHNJ aI-B5 aN5HXMW - a

MN UN WE STR XB4-N5, N R(paB)g -5aBRUe5, 1123-5UNW
 -Be

35H aB	aa5UN Ue 4 MBW4aB3a
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IV. DESCRIPTION OF THE RECORD

MB1 BHMWHX S , -N 5eaW MN UN W5ea B3HB aXB 5ea NUg aVABN H-B WHX
 Ua35HBW3H 1HWI HX-22NN1BpUa/ al IHB aN5W2-5UN 5H5ea BHa35UN NUg aVABN W
 X2aWHN5eUW -5aB UN32 I UN UeH 52U U-5UN

- A. , 22-1123-5UNWB-11Bp-2WB2-5aI 5H5ea BHa35 UN32 I UN g -5aBRUe5
 , 1123-5UN HW -N eUe -B 3 BAN2 1aN UN aXB 5ea 4g R
- B. ea H3a HX B1-B 5UN-N TN5U245 I 1B1-BI XB5ea BHa35
- C. ea B XSTR XB5ea 4-N5 , N RlpaBg -5aBRUe5, 1123-5UNWB4 112a aN5-2
 g -5aB4 112 -N -22-11aN UaWH5ea B XSTR
- D. ea MN-2STR XB5ea 4-N5 , N RlpaBg -5aBRUe5, 1123-5UNWB4 112a aN5-2
 g -5aB4 112 -N -22-11aN UaWH5ea MN-2STR
- E. ea U-5UN HNSHN -N Ra1H5UN 2N R -55-3eaI -W 55-3e aN5, 5H
 5eaW MN UN W
- F. ea Orange County -N Western I/ aN5WH a5eaB Ue -22-/ Ba aN5W
 U 12a aN5UN 5ea 5aB WHX5eHW I/ aN5W
- G. , 22WB1H5W-N 1BWN5-5UN -5aB2WB2-5aI 5H5ea BHa35 UN32 I UN UN5aB-2
 B1H5W-N -N-2 WWB1-BI 3HNW2-N5WH NUg aVABN
- H. , 22W IuW3HN 35aI XB5ea BHa35-N 3HN5-UNaI UN HBXBNaI W XWB1H5W
 5ea B XSTR 5ea MN-2STR HB5ea R
- I. , 221 23 B1H5W-N IHB aN5WB2-5aI 5H5ea BHa351B1-BI XB NUg aVABN
 HB5eaB-/aN5uW
- J. , 221 23 B1H5W-N IHB aN5WB2-5UN 5H -5aBW112uWN -5aB -25 UN5ea
 4-N5 , N RlpaB -5aB5aI
- K. , 22IHB aN5-B -N HB2apUaN5a B3aUaI -N BpIa al -51 23 ea-BW W
 aa5UN W-N HB WHIWB2-5aI 5H5ea BHa35 5ea B XSTR 5ea MN-2STR HB5ea
 R
- L. , 22B-22 -I HI 5aI 2N W 12-NW-N HB UN-N5aWUN32 I UN UeH 52U U-5UN
 /aN5B212-NW5a3U3 12-NW-N HB UN-N5aW5H a5eaB Ue aNpUN aN5-2BpIa
 IHB aN5WXN UN W U-5UN HNSHN 1B1 B W-N -22H5eaBI HB aN5-5UN
 B2ap-N5SH12-NNaI /BH 5e UN5ea -B-

MN UN WE STR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
 -Be

M. , 22 B-N -5aB -N/a aN512-NWUN/a B 5aI B aW I Ba -5aB -N/a aN512-NWIB
H5eaBWU Q-B -5aBW112 Ia -N 12-NM apa2Hl aI 2B-2HBW5a -/ aNBlaW

N. , 22Ra1H5WB1-BaI 5ea BN a HN5 -N g a5aBN4-N aBN-B UNH
g -5aB -5aB H U5aaW

O. , 22-/Ba aN5WaN5aBaI UNSH Nug a5aBN5e-5B2 5a 5H5ea 4-N5 , N RlpaB
g -5aBRUe5, 1123-SUNW-N 5ea Orange County -N Western I/ aN5W

P. , 22H5eaB1 23 Ba1H5W-N IHB aN5WB2-SUN 5H5ea BHa355e-5 aBa WI
Nug a5aBNW 5HB3HNW25-N5WN5ea 1Ba1-B SUNHX5ea B5STR 5ea MN-2STR
HB5ea R -N

Q. , 22H5eaBIHB aN5WN5H5eaB Ua UNB2 IaI - Hpa Ba UaI 23 RaWI BaW
Ha W3SUN

V. GENERAL FINDINGS

A. Certification of the Final EIR

TN-33HB-NBa U5e S , Nug a5aBNe-pa 3HNW aBaI 5ea a5a35WIX5ea BHa35HN5ea
aNpUBN aN5-WWH NUN5ea B5-N MN-2STRW-N 5ea eH2a HX5ea-I UN5B 5pa Ba3HB
1BUBH5-UN -N -3SUNHN5ea BHa35 ea MN-2STR -W BaWN5aI 5H5ea Nug a5aBN
H-B WIX Ua35HBW-N Ba2a-WI XBI 23 Bpld HN -N-B ea Ua35HBWIX H5e
Nug a5aBNe-pa Bpld aI -N 3HNW aBaI 5ea B5-N MN-2STRW-N 5ea UNXB -SUN
Ba2-SUN 5H5ea aNpUBN aN5-2U 1-35WIX5ea BHa35HN5-UNaI UN5eHW IHB aN5W-N 3aBUX 5e-5
5ea STR e-W aaN1Ba1-BaI -N 3H 12a5aI UN3H 12UNBa U5e S , 5eaW MN UN W5ea
Nug a5aBN H-B WIX Ua35HBW 5UX -N -IHI55ea 3HN2 WNNWIX5ea MN-2STR -W5X5H5e
UN5eaW MN UN Wa 3a15 eaBa W3e 3HN2 WNNW-Ba Wa3UX-22 HI UaI 5eaW MN UN W
ea MN-2STR -N 5eaW MN UN W Ba1BaWN55ea UN alaNaN5 I/ aN5-N -N-2 WWHX5ea H-B W
HX Ua35HBW

B. Changes to the Draft EIR

TN5ea 3H Ba HX Ba WHN UN 5H3H aN5WB3aIpaI I BN 5ea 1 23 Bpld -N 3H aN51aBHI
HN5ea B5STR 3aB-UN1H5UNWIX5ea B5STR e-pa aaN HI UaI -N Na UNXB -SUNe-W
aaN-IIaI HUNXB -SUNe-Wapa-2aI 5ea a UN5Na HX -WUNX3-N5Na aNpUBN aN5-2
U 1-355e-5 H 2 BaW5XH 5ea BHa35HB-N-IHI5aI U5U-SUN a-WBa -W W5N5U2
UNBa-W UN5ea WpaB5 HX-NaNpUBN aN5-2U 1-35 -Xa-W2a 1BHa35-2aBN 5pa HB
U5U-SUN a-WBa NH5-IHI5aI 5e-5UW3HNW aB 2 I UaBaN5XH H5eaBW-N-2 aI UN5ea B5
STR 5e-5 H 2 32a-B2 2aWaN5ea WUNX3-N5aNpUBN aN5-2U 1-35WIX5ea BHa35 HB
UNXB -SUN5e-5UN U-5aW5e-55ea 1 23 -W a1BpaI HX- a-NOV X2HI1HB N5 5HBpld -N
3H aN5HN5ea B5STR HNW aN52 Nug a5aBNXN W5e-55ea - 12X3-SUNW-N
32BUX-SUNW -Ia 5H5ea B5STR UN5ea MN-2STR IHN53H2a35pa2 HBUN lpu -22
3HNW5 5a WUNX3-N5Na UNXB -SUN U5UN5ea a-NOV HX 23 RaWI BaW HI a
-N S , Ua2UNaW Ra3UB 2-SUNHX5ea B5STR HB-N 1H5UN5eaBaHX UW
5eaBaXB NH5Ba UaI

MN UN WE STR XB4-N5 , N RlpaBg -5aBRUe5, 1123-SUNW
-Be

C. Evidentiary Basis for Findings

eaW MN UN W Ba - WI 1HNW W N5U2apUaNa UN5ea aN5Ba Ba3HB aXB5ea Nug aVaN H B WHX Ba35HBW ea BaXBaNbaWH5ea B XSTR -N MN-2STR W5XB5e UN5ea MN UN W Ba XBa- W HXBaNba -N -Ba N5UNaI aI SH1BpUa -Na e- Wpa 2W5HX5ea apUaNa Ba2aI 1HNXB5eaW MN UN W

D. Findings Regarding Mitigation Measures

U-5UN a-WBaW IHI5aI S 3a15-WFeaB UaNH5aI 5ea U-5UN a-WBaWeaBaUNBaXBaNbaI -Ba 5eHW UaN5UaI UN5ea MN-2STR -N -IHI5aI 5ea H-B WHX Ba35HBW5XB5e UN5ea R

T 1-35, XaBT 12a aN5-5UNHX U-5UN a-WBaW S 3a15-WFeaB UaW 5aI UN5eaW MN UN WUN-33HB -Nba Ue S , Ua2NaW 5ea H-B WHX Ba35HBW5UN 5e-5aNaUN aN5-2aXa35WHX5ea Ba35 U2N5 a WUNX3-N5HB U2 a U-5aI SH- 2aW5e-NWUNX3-N52apa2 5ea -IHI5aI U-5UN a-WBaW Nug aVaN5e-pa W W N5U2 2aWNaI HBa2U UN5aI -2WUNX3-N5 aNaUN aN5-2aXa35W eaBa Xa- WU2a ea H-B WHX Ba35HBW5e-pa Ia5aB UNaI 5e-5-N Ba -UNW WUNX3-N5aXa35WHN5ea aNaUN aN55e-5-Ba XI NI SH a N-pHU- 2a NaB S , Ua2NaW -N -Ba -33a15- 2aI a SH HpaBUUW 3HNW aB 5UNW W aWBUaI UN S , Ua2NaW eaW HpaBUUW 3HNW aB 5UNW3HNW5HXWa3U3 aNaUN aN5-2 a3HNH U 2a/-2 WBU2 5a3eNH U-2 -N H5eaB aNaX5WHX5ea Ba35 eUe WUX -11Bp-2HX 5ea Ba35-N H 5 aUe 5ea N-pHU- 2a -IpaBa aNaUN aN5-2aXa35WHX5ea Ba35 -W HBa X2 W5aI UN4a35UN 45-5a aN5HX paBUUW HNW aB 5UNW S 3a15-WFeaB UaW 5aI UN5eaW MN UN W5ea H-B WHX Ba35HBW5UN 5e-55ea U-5UN a-WBaWUN3HB HB 5aI UN5H-NI U 1HMI 1HN 5ea Ba35 U2N5e-pa Na WUNX3-N5aNaUN aN5-2U 1-35W5e-5 aBa N5 -N2 aI UN5ea B XSTR

E. Location and Custodian of Records

BW-N5H 23 RaWI Ba Ha NU-N g aVaN-Ba 5ea 3 WH UNWHX5ea IHB aN5W-N H5eaB -5aB25e-53HNW5 5a 5ea Ba3HB HX1BbaI UN W 1HN eUe 5ea Ia3UWHN UN -WI -N W3e IHB aN5W-N H5eaB -5aB2W Ba 2B-5aI -5 NUWHX3aW 4H 5e S 45a5 4-N aB-B UNH , -N -5g aVaN WHX3aW , 2aWNBH 2pI RpaBUa , HI WWHX5ea MN-2STR -Ba -2M-p-U 2a XBBapla -5p-BH WI 23 UB BaW UeUN4-N aB-B UNH-N RpaBUa H NaW-N HN5ea NU-N g aVaN a WaW Wp I 3H -N I 3H BaWa35pa2

VI. FINDINGS REGARDING LESS THAN SIGNIFICANT ENVIRONMENTAL IMPACTS

ea B XSTR UaN5UaI 5ea XZH UN 1HaN5U2U 1-35WHN5ea aNaUN aN55e-5-Ba aU5eaB U Iaa aI N55H a WUNX3-N5-N Ba UNH U-5UN a-WBaWHB W Iaa aI SH a 1HaN5U2 WUNX3-N5 5 U2e-pa 2aW5e-NWUNX3-N5U 1-35W Ue 5ea U 12a aN5-5UNHX-11BHB5a

MN UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW -Be

USU-5UN a-WBa ea HBWX UB35BXN 1 BW-N5H5ea 23 RaWI BaW Ha
 -N S , Ua2NaW 5e-53e-N aWB-2aB 5UNWe-pa aaNBa UBI UN
 HBUBHBHB 5aI UNH5ea BHa35-WNaal al SH-pHU HB2aWaN5eaW 1HaNSU2 W/NX3-N5U 1-35W
 UaN5UaI UN5ea BXSSTR SH2apa2W a2H 5ea 5eBaWHI WHXW/NX3-NBa UaN5UaI UN5ea BXS
 STR

A. Surface Water Hydrology and Water Quality

BHa35 HNB 35UN

- 4apaN - W - -N RaWBHB HNB 35UN, B-

S T 12a aN5-5UNHXW-WN-23HNWp-5UNWB/a H 2
 UB2 Ia HI UG-5UNHX5ea SB W B3 HXUN5- a SB 35 B -N I B2UN UNH
 al BB SH1BpUa -11 5UN-2-NeHBWB5ea SB 35 B eaW-35pUaW
 - B W2UNW/NX3-N5U 1-35W WBU5aI Ue WI U aN5-5UN-N
 aBWN-55ea -W HX5ea I- 4 W-N5U2aBWN - -2MIH3 BI BN
 5eaW WHB 5aB 3HNB 35UN-35pUaW5eBI /e 5ea W HX aB WSHI paB
 -5aBXH

- HaNSU2T 1-35 ea BHa353H 2 B W2UNWI U aN5-5UN-N
 aBWN-55ea -W HX5ea 4apaN - W - ea 1HaNSU2U 1-35W
 HX5ea BHa35HNWI U aN5-5UN-N aBWN-55ea -W HX5ea I-
 -Ba I U5 WI UN5ea BXSSTR -51-/aW -N -N

T 1-35 BUBSH USU-5UN HaNSU2 W/NX3-N5

3 USU-5UN a-WBa ea BHa35 U2UBHBHB 5a USU-5UN
 a-WBa S UN4a35UN -N HX5ea BXS
 STR eUe U2aNBa 5e-5 aXB a/UNNV 3HNB 35UN -
 WI U aN5-5UN-N aBWN3HNB2 12-N -N - 45HB g -5aB
 H2 5UN BapaNUN 2-N 4g U2 a 1Ba1-BaI
 NUg aVaN-NI W U5aI SH5ea 4-N5 , N RlpaBg -5aB -25
 HNB2 HB 4, Rg XB-11Bp-2 g eaBa 1HWU2a
 aBWN3HNB2 a-WBaW U2 a U 12a aNaI NUg aVaN
 aXB a/UNNV HB UN5ea BUN W-WN -N SH UNU Ua WHB
 5aB U 1-35W WBU5aI Ue aBWN-N HXW5a W2-5UNHX5ea
 4, R 45-N-B aBWN-N WI U aN53HNB2X-5 BaW U2 a WI
 I BN -N U al U5a2 -XaB/BIUN -N a 3-p-5UN , 4g
 UW Ba Ua aN5HX5ea aNaB2 HNB 35UN45HB -5aB -5UN-2
 H2 5-N5 U5e-B a S2U UN-5UN4 Va S4 aB U

I MN UN W T5UN N2Ua2 5e-55ea Ia H25UN-N HI UG-5UNHX5ea
 SB W B3 W35UNHX5ea UN5- a SB 35 B U2I U5e-B a Ia BWUNSH
 WBX3a -5aBXH WTN5ea N2Ua2 apaN55e-5aBWN-N
 WI U aN5-5UNI HaWB3 B 5ea U 12a aN5-5UNHXWI U aN5-5UN

MN UN WE STR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
 -Be

Tg S4 SR S T T -/a

-N aBMMN3HNSB2 a-WBWB UB I NaB S U2
UNU Ua aBMMNB2 5aI U 1-35W, N Ba -UNU U 1-35W U2 a
2aW5e-NWUNX3-N5

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BHa35HNWI U aN5 5JN
-N aBMMNUW2aW5e-NWUNX3-N5

S 4 WNSU2aBMMN-N WI U aN5 5JN - HB3 BI BN
/BIUV -N a 3-p-5JN-WBU5aI Ue 3HNSB 35JNHXNa -33aWBFIW
-5I- -N U aIU5a2 1V8a-

- HaNSU2T 1-35 ea BHa353H 2 BaW25UNWI U aN5 5JN-N
aBMMNI BN /BIUV -N a 3-p-5JNHXNa -33aWBFIW ea
1HaNSU2U 1-35W5X5ea BHa35HN aBMMN-N WI U aN5 5JN
3- WI /BIUV -N a 3-p-5JN-35pU5aW-WBU5aI Ue
3HNSB 35JNHXNa -33aWBFIW-55ea I- -N U aIU5a2
1V8a- -Ba IUW WI UN5ea BXSSTR -51-/aW -N
-N UN5ea MN2STR -51-/a

T 1-35 BHBSH UJ-5JN HaNSU2 WUNX3-N5

3 UJ-5JN a-WBa ea BHa35 U2UN8HEHB 5a UJ-5JN
a-WBa S UN4a35JN -N HX5ea BXS
STR eUe U2aNWBa 5e-5 aXB a/UNNU 3HNSB 35JN -
WI U aN5 5JN-N aBMMN3HNSB2 12N -N - 4g U2 a
1Ba1-Ba NUg aV8aBN-N W U5aI 5H5ea 4, Rg XB
-11Bp-2 g eaBa 1HWU2a aBMMN3HNSB2 a-WBW U2 a
U 12a aNaI NUg aV8aBN aXB a/UNNU HB UN5ea B UN
W-WN -N 5H UNU Ua WHB 5aB U 1-35W-WBU5aI Ue
aBMMN-N HXXW5a W5 5JNHX5ea 4, R W-N-B aBMMN-N
WI U aN5 3HNSB2 Xa-5 BaW U2 a WI I BN -N U aIU5a2
-5aB/BIUV -N a 3-p-5JNW, 4g UW Ba UB aN5HX5ea
aNab2 HNSB 35JN45HB -5aB S4 aB U5

I MNUV W NUg aV8aBNe-pa a2U UN 5aI XH 5ea BHa355ea
Ba2B-5JNHX- Ua W35JNHX5ea 4 S -33aWBFI U 1-35W
XH 5eUWa2a aN5IUW WI UN5ea BXSSTR U25eaBaXB NH
2HN aBH3 B T 12a aN5 5JNHXaBMMN3HNSB2 a-WBW
Ba UB I S I BN 3 5-N X2/BIUV HlaB 5JNW U2
UNU Ua aBMMNB2 5aI U 1-35WH- 2aW5e-NWUNX3-N5 2apa2

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BHa35HNWI U aN5 5JN
-N aBMMNUW2aW5e-NWUNX3-N5

4-N5, N RUpaB HNSB 35JN, Ba-

S 4 WNSU2aBMMN-N WI U aN5 5JN - HB3 BI BN

MNUV WSTR XB4-N5, N RUpaBg -5aBRUe5, 1123-5JNW
-Be

Tg S4 SR S T T -/a

/BIUW -N a 3-p-5UN-35pUdW WBU5aI Ue 3HNSB 35UNHXNa
1Ua2NaW-N Ba2-5aI -11 BaN-NBaW BaW25UN UN1HaNSU22 WUNX3-N5
U 1-35W

- HaNSU2T 1-35 ea BHa353H 2 BaW25UNaBHMJN-N
WU aN5-5UNBa2-5aI SH/BIUW -N a 3-p-5UNHXNa 1Ua2NaW
-N Ba2-5aI -11 BaN-NBaW ea 1HaNSU2U 1-35WHX5ea BHa35HN
aBHMJN-N WU aN5-5UNI BN /BIUW -N a 3-p-5UN-35pUdW
-WBU5aI Ue 3HNSB 35UNHXNa 1Ua2NaW-N Ba2-5aI
-11 BaN-NBaW-Ba IUW WU UN5ea BXSTR -51-/aW -N

T 1-35 BUBSH UJ-5UN HaNSU22 WUNX3-N5

- 3 UJ-5UN a-WBa ea BHa35 U2UN3HBHB5a UJ-5UN
a-WBa S UN4a35UNW -N HX5ea
BXSTR eUe U2aNBa5e-5 aXB a/UNUN 3HNSB 35UN
Nug aVaN U21Ba1-Ba -N W U5H5ea 4, Rg XB
-11Bp-2 - WU aN5-5UN-N aBHMJN3HNSB212-N -N - 4g
g eaBa 1HWU2a aBHMJN3HNSB2 a-WBaW U2 a U 12a aN5aI
Nug aVaN aXB a/UNUN HB UN5ea BUN W-WNSH
UNU Ua WHB55aB U 1-35W-WBU5aI Ue aBHMJN-N HXXWa
W5-5UNHX5ea 4, R 45-N-B aBHMJN-N WU aN53HNSB2
Xa-5 BaW U2 a WU I BN -N U aIU5a2 -XaB/BIUW -N
a 3-p-5UNW, 4g UW Ba Ua aN5HX5ea aNaB2
HNSB 35UN45HB -5aB S4 aB U

- I MNUW T 12a aN5-5UNHXaBHMJN3HNSB2-N -5aB -25
1Ba35UN a-WBaW BaI S I BN 3HNSB 35UN
U2BaI 3a aBHMJN Ba2-5aI U 1-35WUN5ea 4-N5, N RpaB
HNSB 35UN, Ba- SH- 2apa2HX2a W5e-NWUNX3-N5

- a HN2 WJN ea 1HaNSU2U 1-35HX5ea BHa35HNWU aN5-5UN
-N aBHMJN U2aW5e-NWUNX3-N5

S U5e-B aHX/BN -5aBXH Ia -5aBN a2W3H 2
3- W WHB55aB WU aN5WH B-N aBHMJN-51HNSHXI U5e-B a

- HaNSU2T 1-35 ea BHa353H 2 BaW25UNWU aN5WH B-N
aBHMJN-55ea 1HNSHXI U5e-B a ea 1HaNSU2U 1-35WHX5ea
BHa35HNWHB55aB WU aN5WH B-N aBHMJN3- WU -Ba
IUW WU UN5ea BXSTR -51-/aW -N -N

T 1-35 BUBSH UJ-5UN HaNSU22 WUNX3-N5

- 3 UJ-5UN a-WBa ea BHa35 U2UN3HBHB5a UJ-5UN
a-WBa S UN4a35UN -N HX5ea BX

MNUW WE STR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
-Be
Tg S4 SR S T T -/a

STR -N 1-/a HX5ea MN-2STR eUe U2aNWBa 5e-51BIB
SHIa -5aBN a2W BN a 3-p-5UN-35pUaW NUg aVaBN
U2I Ua355ea 3HNSB 3SHUNW 2aNaB I UWI-5UNI apUaW-5
I UWe-B a 1HNSWH1BapaN5aBWIN 4aIU aN5-5UN -WUW U2 a
WI -5Ia -5aBN I UWe-B a 1HNSWH1BapaN5a 3aWU H NNSB-
WI U aN5-5UN ea -WUW U2 a 3HNSB 35aI aXBa Ia -5aBN
-N Ba/ 2-B -UN5-UNaI I BN 3HNSB 35UN UNB2 I UY -XaBVSHB
apaNSWH aa1 5ea UN/HI HB UN HB aB , HNSB U2paBK
aXa35pa HI aB 5UNHXaNaB I UWI-5UNXa-5 BaW BN
Ia -5aBN

I MN UN W TNS-2-5UNHXaNaB I UWI-5UNI apUaW BISH
Ia -5aBN -35pUaW U21BpUa -11BI BU5a aBWIN3HNSB2
a-WBaW BN a 3-p-5UN-35pUaW5e-5U5pHpa Ia -5aBN
a2W-N U2BaI 3a U 1-35WH- 2aW5e-NWUNX3-N52apa2 , N
Ba -UNU U 1-35W U2 a 2aW5e-NWUNX3-N5

a HN2 WIN ea 1HaNSU2U 1-35HX5ea BHa35HN1HaNSU2
WI U aN5-5UN-N aBWINU2aW5e-NWUNX3-N5

3 apU -N HN HNSB 35UN, Ba-

S 4 WNSU2aBWIN-N WI U aN5-5UN - HB3 BI BN
/BI UN -N a 3-p-5UN-35pUaW WBU5aI Ue 3HNSB 35UNHXNa
1Ua2NaW-N Ba2-5aI -11 BaN-NBaWBaW25UN UNWUNX3-N5 U 1-35W

- HaNSU2T 1-35 ea BHa353H 2 BaW25UNaBWIN-N
WI U aN5-5UNI BN /BI UN -N a 3-p-5UNHXNa 1Ua2NaW
ea 1HaNSU2U 1-35WHX5ea BHa35HNaBWIN-N WI U aN5-5UN
-Ba I U5 WI UN5ea B XSTR -51-/aW -N

T 1-35 BISH U-5UN HaNSU2 WUNX3-N5

3 U-5UN a-WBa ea BHa35 U2UN8HEI HB 5a U-5UN
a-WBa S UN4a35UN -N HX5ea BX
STR eUe U2aNWBa 5e-5 aXBa a/UNUW 3HNSB 35UN
NUg aVaBN U21Ba1-Ba -N W U5H5ea 4, Rg XB
-11Bp-2 - WI U aN5-5UN-N aBWIN3HNSB2 12-N -N - 4g
g eaBa 1HWU2a aBWIN3HNSB2 a-WBaW U2 a U 12a aN5aI
NUg aVaBN aXBa a/UNUW HB UN5ea BUN W-WN -N SH
UNU Ua WH5 5aB U 1-35W WBU5aI Ue aBWIN-N HXXW5a
W5-5UNHX5ea 4, R W-N-B aBWIN-N WI U aN5-5UN
Xa-5 BaW U2 a WI I BN -N U aIU5a2 -XaB/BI UN -N
a 3-p-5UNW, 4g UW Ba Ua aN5HX5ea aNaB2
HNSB 35UN45B -5aB S4 aB U

I MN UN W T 12a aN5-5UNHXaBWIN3HNSB2-N -5aB -25

MN UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

1BHa35UIN a-WBaW BN 3HNMB 35UIN U2BaI 3a 5ea U 1-35W
BaW2UN XH 5ea / BH NI IUV B-NBa I BN 3HNMB 35UINSH- 2aW
5e-NW/NX3-N52apa2 , N Ba -UNU U 1-35W U2 a 2aW5e-N
W/NX3-N5

a HN2 WFN ea 1HaNU2U 1-35HX5ea BHa35HNaBWFN-N
WU aN5-5UINU2aW5e-NW/NX3-N5

I 5a Ba HNSB 35UIN, Ba-

S 4 WNU2aBWFN-N WU aN5-5UIN - HB3 BI BN
/BIUN -N a 3-p-5UIN-35pUaW WBU5aI Ue 3HNMB 35UINHXNa
1Ua2UNaW-N Ba-5aI -11 BaN-NBaW2UN UNW/NX3-N5U 1-35W

- HaNU2T 1-35 ea BHa353H 2 BaW2UNaBWFN-N
WU aN5-5UINI BN /BIUN -N a 3-p-5UINHXNa 1Ua2UNaW
ea 1HaNU2U 1-35WX5ea BHa35HNaBWFN-N WU aN5-5UIN
-Ba IUV WU UN5ea BXS TR -51-/aW -N

T 1-35 BHBSH UU-5UIN HaNU2 W/NX3-N5

3 UU-5UIN a-WBa ea BHa35 U2UN8HIB 5a UU-5UIN
a-WBa S UN4a35UIN -N HX5ea BXS
STR eUe U2aNBa 5e-5 aXB a/UNNU 3HNMB 35UIN
NUg aVaN U2Ba1-Ba -N W U5H5ea 4, Rg XB
-11Bp-2 - WU aN5-5UIN-N aBWFN3HNSB212-N -N - 4g
g eaBa 1HWU2a aBWFN3HNSB2 a-WBaW U2 a U 12a aNaI
NUg aVaN aXB a/UNNU HB UN5ea BUN W-WN -N SH
UNU Ua WHS 5aB U 1-35W WBU5aI Ue aBWFN-N HXW5a
W5-5UINHX5ea 4, R W-N-B aBWFN-N WU aN5-5UINSH
Xa-5 BaW U2 a WU I BN -N U aIU5a2 -XaB/BIUN -N
a 3-p-5UINW, 4g UW Ba Ua aN5HX5ea aNaB2
HNMB 35UIN4SHB -5aB S4 aB U

I MNU W T 12a aN5-5UINHXaBWFN3HNSB2-N -5aB -25
1BHa35UIN a-WBaW BN 3HNMB 35UIN U2BaI 3a 5ea U 1-35W
BaW2UN XH 5ea / BH NI IUV B-NBa I BN 3HNMB 35UINSH- 2aW
5e-NW/NX3-N52apa2 , N Ba -UNU U 1-35W U2 a 2aW5e-N
W/NX3-N5

a HN2 WFN ea 1HaNU2U 1-35HX5ea BHa35HNaBWFN-N
WU aN5-5UINU2aW5e-NW/NX3-N5

BHa35 1aB 5UIN-N -UNaN-NBa

- 4apaN - W - -N RaWpHUB HNSB 35UIN, Ba-

4g W HX5ea 4apaN - WRaWpHUBXBW-WN-2 -5aB3HNMB-5UIN
MNU WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UINW
-Be
Tg S4 SR S T T -/a

WB/a H 2 -2aB5ea - H N5HX -5aBUNWB/a -N eaUe5HX5ea
BWBHUB -5aBWBX3a eUW H 2 UNB-W 1HaNU2XBaBHMUN UeUN
5ea BWBUB

- HaNU2T 1-35 ea BHa353H 2 -2aB5ea - H N5HX -5aBUN
WB/a UNB-WN 5ea 1HaNU2XBaBHMUN UeUN5ea BWBUB
ea 1HaNU2U 1-35WX5ea BHa35HNaBHMUN UeUN5ea BWBUB
-B I UY WAI UN5ea B XSTR -51-/a

T 1-35 BHBH UU-SUN aW5e-NWNU3-N5

- 3 UU-SUN a-WB H UU-SUNUBa UBI XB5eUMHaNU2
U 1-35 a3- W 5ea 1HaNU2XB3HNWB-SUNWB/a SHaW25UN
aBHMUN UeUN5ea BWBUBUNa/ 2U2a

- I MNUV W WX5ea 4apaN - WRaWBHUBXBW-WN-2 -5aB
3HNWB-SUNWB/a H 2 -2aB5ea - H N5HX -5aBUNWB/a
-N 5ea eaUe5HX5ea BWBUB -5aBWBX3a XH 5U a 5H5U a
I- WaB a-B H apaB 5ea 5a 1HB B UNB-W UN5ea -B- HX
UN N-SUN H 2 HB3 BUN-N-B- -2a-I IaWUN-5aI XBXH
WB/a W -N UN-N-B- 5e-5 H 2 IaBHI U-22 eHI XHI
-5aB UaN5ea N-5 B HX5ea /aHY HX5ea BWBUB U UW
NUa2 5e-5 -5aBWBaI aeUN 5ea I- H 2 3B-5a WB BN
-35pU B W25UN UN aN5eaW-N 5ea 1HaNU2XB3HNWB-SUN
WB/a SHaW25UNaBHMUN UeUN5ea BWBUBU2aW5e-N
WNU3-N5

- a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNaBHMUN UeUN
5ea BWBUBU2aW5e-NWNU3-N5

4g WX4apaN - WRaWBHUBXBW-WN-2 -5aB
3HNWB-SUNWB/a 3H 2 Ia/BIa -5aB -25 -W B W25HX-II UN-2
U 1H N aN5HXXH WUN5ea 4apaN - WRaWBHUB

- HaNU2T 1-35 ea BHa353H 2 Ia/BIa -5aB -25 -W
B W25HX-II UN-2I B SUNHXU 1H N aN5HXXH WUN5ea 4apaN
- WRaWBHUB ea 1HaNU2U 1-35WX5ea BHa35HN -5aB
-25 -B I UY WAI UN5ea B XSTR -51-/a -N UN5ea
MN-2STR -51-/aW -N

T 1-35 BHBH UU-SUN HaNU2 WNU3-N5

- 3 UU-SUN a-WB ea BHa35 U2UNBHB 5a UU-SUN
a-WB 4g UN4a35UN HX5ea B XSTR eUe
U2aNBa 5e-5UN a-BW eaN5ea BHa35B W25WUNW-WN-2 -5aB
3HNWB-SUNWB/a aeUN 4apaN - W - NUg aWBN U2
1-B3U-5a UN- 1BapaN5pa 1BY B U 12a aNaI 5ea HlaB SBW

MNUV WSTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

HX4apaN - W - a3- W-N aBH U 3HN UUNW Ba - 1BH 2a
- WBU5aI Ue 3 BaN5HlaB SUNW-54apaN - W - UUV
-N3U-5aI 5e-55ea XHI 3HN5B2I U5B35WHX4-N aB- B UNH
RlpaBWa -N BN a H N5aW NH N-W HB-241HNMBW U2
U 12a aN5- 1BH B W3e -W -5aB -25 HNSHBW -N
-aB SUN 5H-pHU -N BapaBW -N aBH U 3HN UUNW5e-5 -5aB
-25 H a35paW-Ba N5a 3aaIaI TN a-BW eaN5ea BHa35
BaW25WUNW-WN-2 -5aB3HNWp- SUNVHB/a aeUN 4apaN - W
- NUG aVaN U21-B3U-5a UNW3e 1BH B -N 1BH Ua
XN UN 1BH H5UN-25H5ea pH2 a HXW-WN-2 -5aB3HNWp- SUN
VHB/a aeUN 4apaN - W -

I MNUVW NUG aVaNWI-B3U-SUNUN-N-N3U-5aI -5aB
-25 1BH B 5H HNSHB-N 3HBa35-N aBH U 3HN UUNWUN
-5aBWU 1H NaI UN4apaN - WRaWpHUB U2BaI 3a 5ea U 1-35
HN -5aB -25 5H- 2aW5e-NWNX3-N52apa2UN5eHW a-BW eaN
5ea BHa35BaW25WUNW-WN-2 -5aB3HNWp- SUNVHB/a aeUN
4apaN - W - , N Ba -UNU U 1-35W U2 a 2aW5e-N
W/NX3-N5

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BHa35HN5ea Ia/ BI- SUN
HX -5aB -25 UWaW5e-NWNX3-N5

4g W HX5ea 4apaN - WRaWpHUBXBW-WN-2 -5aB3HNWp- SUN
VHB/a H 2 UNBa- W 1HaNSU2I- -/a XH WUeaW

- HaNSU2T 1-35 ea BHa353H 2 UNBa- W 1HaNSU2I- -/a
XH WUeaW ea 1HaNSU2U 1-35WHX5ea BHa35HNI- -/a XH
WUeaW-Ba IUW WAI UN5ea BXSSTR -51-/a

T 1-35 BUBSH UU-SUN aW5e-NWNX3-N5

3 UU-SUN a-WBa H UU-SUNUBa UBaI XB5eUMHaNSU2
U 1-35 a3- W 5ea BaWpHUBI aWUN-NI W-1a UNU UaW5ea
1HaNSU2XBaI- -/a XH WUeaW

I MNUVW , WUea 3H 2 HB3 B UeUN5ea 4apaN - WRaWpHUB
-W BaW25HX- VBN a-Be - a UN5ea p3UN5 HX5ea BHa35
, Ba- H apaB 5ea BaWpHUBI aWUNBaXa35M2-NNW XB5ea
1HaNSU2aXa35WHKa-Be - a HUN -NI 5ea -W aSB3-2W-1a
HX5ea BaWpHUB UNU UaW5ea 1HaNSU2XBaI- -/aW a 5H
e-B HN3 U 1HXWUea -paW eaBaXBa 5ea W HX5ea 4apaN
- WRaWpHUBXBW-WN-2 -5aB3HNWp- SUNVHB/a U2N5
UNBa- W 5ea 1HaNSU2XBaI- -/a XH WUeaW

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BHa35Ba-5aI 5HI- -/a
XH WUeaWUW5e-NWNX3-N5

MNUVW ESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

4g W HX4apaN - WRaWpHUBXBW-WN-2 - 5aB3HNWp-5UN
WB/a H 2 UNBa-W 5ea 1HaNSU2XB IXH WONaWpHUB

- HaNSU2T 1-35 ea BHa353H 2 UNBa-W 5ea 1HaNSU2XB
IXH WON 5ea B WpHUB ea 1HaNSU2U 1-35WX5ea BHa35HN
5ea 1HaNSU2XB IXH W Ba IUW WAI UN5ea B XSTR -51-/a

T 1-35 BHBH SU-5UN aW5e-NWUNX3-N5

3 SU-5UN a-WBa H SU-5UNUBa UBI XB5eUMHaNSU2
U 1-35 a3- W 5ea B WpHUBW aWUN - aWU 1-35W WBU5ai
Ue IXH W NUa2

I MNUVW W HX4apaN - WRaWpHUBXBW-WN-2 - 5aB
3HNWp-5UNWB/a H 2 UNBa-W 5ea 1HaNSU2XB IXH WON
5ea B WpHUB HaNSU2 IXH W aW2UY XH BHa35
U 12a aN5 5UN H 2 a 3HNXNaI 5H5ea -Ba- aeUN 4apaN - W
- BaW2UY 1BU -B2 XH 5ea/Ba-5aBpH2 aHX -5aBUN5ea
B WpHUB ea B WpHUBW aWUN-W XHI WB/a X3U5 - aW
WUNX3-N5U 1-35W-W BaW2HX IXH W NUa2

a HN2 WUN ea 1HaNSU2U 1-35HX5ea BHa35Ba2 5ai 5H5ea
1HaNSU2XB IXH W W2aW5e-NWUNX3-N5

4-N5 , N RpaB HNSB 35UN, Ba-

4g ea BHa35 H 2 123a UeUN- a-BXHI e- -B -Ba-
WB 35 BaW eUe H 2 BaIUa35XHI XH WXB -5aBI paBWN

- HaNSU2T 1-35 ea BHa353H 2 BaW2UN- BaIUa35UNHXHI
XH WXB -5aBI paBWN ea 1HaNSU2U 1-35WX5ea BHa35HN
5ea BaIUa35UNHXHI XH W Ba IUW WAI UN5ea B XSTR -5
1-/a

T 1-35 BHBH SU-5UN aW5e-NWUNX3-N5

3 SU-5UN a-WBa H SU-5UNUBa UBI XB5eUMHaNSU2
U 1-35 a3- W X3U5 IaWUNSHBaIUa35 -5aB IpaBWN H 2
a W a35SHBpld -N -11Bp-2 5ea 4, S -N 2B-2
WHNWBHX5ea I-

I MNUVW paBWNWB 35 BaW-NI H5eaBUNXB WB 35 Ba 12-3ai UN
5ea a-BXHI e- -B -Ba- UN5ea 4, R HNSB 35UN, Ba-
H 2 a IaWNaI Wa3UX3-2 SHBaIUa35 -5aB IpaBWN
M3U5 IaWUN H 2 a W a35SHBpld -N -11Bp-2 5ea
4, S -N 5ea XHI 3HNSB2I USB35WX4-N aB-N B UNH
RpaBWA -N BN a H NSdW

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a HN2 WJN ea 1HFaNU2U 1-35HX5ea BHa35Ba2 5aI SH12-3UN
WB 35 BaWONSH- a-BXHH HNa UWaW5e-NWUNX3-N5

3 5a Ba HNSB 35UN, Ba-

4g g -5aBI a2paBaI UNH5ea 3e-NNa22a-IUN SH5ea 5a
-WNV3H 2 BaW2UNW W5N5U2aBHMJN5H5eUW3e-NNa2

- HFaNU2T 1-35 ea BHa353H 2 BaW2UNW W5N5U2aBHMJN5H
5ea 3e-NNa22a-IUN SH 5a -WNV ea 1HFaNU2U 1-35W5HX5ea
BHa35HN5ea aBHMJN5HX5ea 3e-NNa22a-IUN SH5ea 5a -WNV
-Ba IUW WAI UN5ea BXSSTR -51-/a

T 1-35 BHBSH UJ-5UN HFaNU22 WUNX3-N5

3 UJ-5UN a-WBa ea BHa35 U2UN8HH HB 5a UJ-5UN
a-WBa 4g UN4a35UN HX5ea BXSSTR eUe
U2Ba UB 12-3a aN5HX-NaNaB IUWI-5UNWB 35 Ba -IapUa
SHVH XW HpUN XH WAI-WH1BaPaN5aBHMJN -55ea 5aB UN W
HX5ea 1Ua2UNa Ia2paBN -5aB5H5ea 5a -WNV3e-NNa2SH
aNWBa 5e-5 -5aBXH 5ea BHa35I HaWN5WH BHBaBI a 5ea
3e-NNa2

I MNI UN W ea 3e-NNa2XH 5ea MN5-N H aB 2-N5H5ea 5a
-WNVWNa-BeaNI U3e 5e-5 -WBUUN 2 U5SH-33H HI-5a
5ea IUW5e-Ba XH 5ea MN5-N H aB 2-N5 1 SH-11BH U -5a2
3XW paBSU a 5ea 3e-NNa2e- Waa1aNaI 5eBH /e WH B-N UW
3 BaN53-1-3U UWaWU -5aI SH a/Ba-5aB5e-N 3XW TN5W
3 BaN5W5a 5ea 3e-NNa2e-WW UaI XNaW-N WNI We-pa aaN
Ba HpaI 5ea 3e-NNa2 HSH UWBB 3H 2a -N 5ea -N W-Ba
1BHa35aI ea-p pa/a5-5UN ea BHa35 H 2 UN8HI 3a XH W
1 SH 3XWONSH5ea IU3e eH apaB XH W-Ba /aNab 2 a 1a35aI
SH a NH HB 5e-N 3XW aWU5a 5ea 3e-NNa2 aUN Ba2-5pa2
W5 2a 5eaW XH W3H UNaI U5e XH W5H 5ea MN5-N H aB
2-N5 3H 2 BaW2UNWH B-N aN5eUN HX5ea 3e-NNa2
12-3UN -NaNaB IUWI-5UN IapUa -55ea 5aB UN W5HX5ea 1Ua2UNa
Ia2paBN -5aB5H5ea 5a -WNV-WBa UB 4g 5ea
XH U2WH -N -5aBXH 5ea BHa35 U2NH5WH BHBaBI a
5ea 3e-NNa2 , N Ba -UNU U 1-35W U2 a 2aW5e-NWUNX3-N5

a HN2 WJN ea 1HFaNU2U 1-35HX5ea BHa35HN5ea aBHMJN5H
5ea 3e-NNa2UW5e-NWUNX3-N5

I 4-N5 , N RpaB4a/ aN5 E4apaN - W - SH 5a g aUB

4g ea BHa35 H 2 Ia3Ba-W BpaBXH -N W3H 2 Ia/BIa -5aB
-25

MNI UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

- HANU2T 1-35 ea BHa353H 2 Ia/BIa -5aB -25 ea
1HANU2U 1-35WIX5ea BHa35HNBPBXH -N -5aB -25 -B
IUS WAI UN5ea BXS TR -51-/a -N UN5ea MN2STR -5
1-/aW 5eH /e ,

T 1-35 BHBH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WB H UJ-5UNUBa UI XB5eUMHANU2
U 1-35 a3- W5ea 3e-N aWUN -5aB -25 3- WI 5ea
IpaBWNWXH 5ea BHa35 H 2 a UNB

I MN UN W ea BHa35 U2Ia3B-W BpaBXH H apaBapaN
-W UN - HB3-W W5 -5UN eaB -2HX5ea -5aBI paBaI
5ea BHa35 H 2 e-pa H5eaB UW XH aI IH N5B- NaB H
BHa353HN UNW5eaB H 2 UNHBHN3e-N aWUN 4
3HNBNB UNW-N T 2apa2W HNa HX5ea 1HANU2UNB-WWUN
4 HB T 3HNBNB UNW H 2 a 3aal -WN12-NH a35paW
eaB5B eUa IpaBWNWXH 5ea BHa353H 2 3- W3e-N aW
UN -5aB -25 5eW3e-N a H 2 a UNB-N 2aW5e-N
WUNX3-N5

a HN2 WUN ea 1HANU2XB5ea BHa35HIa/BIa -5aB -25
U2aW5e-NWUNX3-N5

4g BHa35IpaBWNW H 2 Ia3B-W XH UNRpaB4a/ aN5 UN-
-NaB5e-53H 2 -X35WI U aN5BNWH5

- HANU2T 1-35 ea BHa353H 2 -X35WI U aN5BNWH5
Ia3B-WW XH UNRpaB4a/ aN5 ea 1HANU2U 1-35WIX5ea
BHa35HNWI U aN5BNWH5-B IUS WAI UN5ea BXS TR -5
1-/aW 5H -N UN5ea MN2STR -51-/aW 5eH /e

T 1-35 BHBH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WB H UJ-5UNUBa UI XB5eUMHANU2
U 1-35 a3- WapaN U5e - Ia3B-W UNXH W5ea H 2 W2 a
WX3Ia55H H UJa -N BNWH5WN

I MN UN W BHa35IpaBWNW H 2 Ia3B-W XH UNRpaB
4a/ aN5 UN- -NaB5e-53H 2 -X35WI U aN5BNWH5 ,
Ia3B-W UNXH UN4a/ aN5 H 2 3- W XH WSHX2 aH 5ea
IUS-e-B a B5a Na3aWB 5H H UJa -N BNWH53H 2a -N
/Bpa2 H apaB 5eWpaBw/ aN5 1U-22 IHaWN53HNBU 5a
/Bpa2-N 3H 2a 5HIH N5B- 2B-5UNW-N - Ia3B-W UNXH
H 2 N5B W2UN- 3e-N a 5H5ea /aH H5eH H 3 IBBaWUN
4a/ aN5 HX5ea BpaB MH W H 2 W2 a /B-5aB5e-N 3XW

MN UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

eUe UWWX3IaN5H H Ua -N SB NWHE WN eaBAXH 5eU
U 1-35U2aW5e-NWUNX3-N5

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNWI U aN5
SB NWHE U2aW5e-NWUNX3-N5

a 4-N5 , N RpaB4a/ aN5 E 52a g aUBH5ea HN2 aNBa Ue U2 Ba

4g ea BHa35 H 2 Ia3Ba-W BpaBXH -N W3H 2 Ia/BIa -5aB
-25

- HaNU2T 1-35 ea BHa35H 2 Ia/BIa -5aB -25
Ia3Ba-WW XH UNRpaB4a/ aN5 ea 1HaNU2U 1-35WX5ea
BHa35HNIa3Ba-WI -5aB -25 -Ba IUW WI UN5ea BXS^{TR}
-51-/a -N -N UN5ea MN²STR -51-/aW
5eH/e -N 1-/aW 5eH/e ,

T 1-35 BHBH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHaNU2
U 1-35 a3- W5ea Ia3Ba-W UN -5aB -25 UN4a/ aN5
BaW2UN XH Ia3Ba-WI BpaBXH UW UNB

I MNUW ea BHa35 U2Ia3Ba-W BpaBXH H apaBapaN
-W UN - HB3-W W5 -5UN eaBa -2HX5ea -5aBI paBaI
5ea BHa35 H 2 e-pa H5eaB UWXH aI IH N5Ba- NaB H
BHa353HN UNW5eaBa H 2 UNHBHN3e-N aWUN 4
3HNanB SUNW-N T 2apa2W eaBAXH eUa I paBUNWXH
5ea BHa353H 2 3- W3e-N aWUN -5aB -25 5eU3e-N a
H 2 a UNB-N 2aW5e-NWUNX3-N5

a HN2 WUN ea BHa35 WU 1-35HN -5aBXH UNRpaB4a/ aN5
U2 a 2aW5e-NWUNX3-N5

4g BHa35I paBUNW H 2 Ia3Ba-W XH UNRpaB4a/ aN5 UN-
-N5aB5e-53H 2 -X635WI U aN5 SB NWHE

- HaNU2T 1-35 ea BHa35H 2 -X635WI U aN5 SB NWHE
Ia3Ba-WW XH UNRpaB4a/ aN5 ea 1HaNU2U 1-35WX5ea
BHa35HN-Ba IUW WI UN5ea BXS^{TR} -51-/aW 5H
-N UN5ea MN²STR -51-/aW 5eH/e

T 1-35 BHBH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHaNU2
U 1-35 a3- W5ea 3e-N a UNWI U aN5 SB NWHE BaW2UN XH
Ia3Ba-WI BpaBXH UW UNB

MNUW WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

I MN UN W TSWWU -5aI 5e-51a- I UWe-B a - WBU5aI Ue 4apaN
- W - NaB- a-BXH 3HN UN 3H 2 a 3XWU
5ea BpaBW/ aN5XH 52a g aUBH U2 Ba NaB e-W T
HX5ea 2 Na H2 Ua2Na 1 H 3XW3H 2 a I paBaI -5
52a g aUBUN2-5aB1e- WWHX5ea 2 Na H2 Ua2Na 3XW
3H 2 a I paBaI -5HB- Hpa 52a g aUB , Ia3Ba- W HX 5H
3XW3H - XH HX 3XW3H 2 3- W XH WUN4a/ aN5
HX5ea BpaBHX22 a2H 5e-5Na3aWB 5H H Ua -N SB NWHS
3H 2a -N / Bpa2 H apaB 5eUBpaBW/ aN5 1U-22 I HaWN5
3HNBU 5a / Bpa2-N 3H 2a 5IH N5B- 2B-5UNW-N 5e W
5eUW a3Ba- W UNXH H 2 N5B W2UN- 3e-N a 5H/ aH HBeU
1B Ba W WUN4a/ aN5

a HN2 WUN ea BHa35 WU 1-35HN WI U aN5 SB NWHS U2 a
2a W5e-NWUNX3-N5

X 4-N5 , N R paB4a/ aN5 E HN2 aNa Ue U2 Ba 5H S 4Ba5

4g ea BHa35 H 2 Ia3Ba- W BpaBXH -N W3H 2 Ia/ BIa -5aB
-25

- HaNU2T 1-35 ea BHa353H 2 Ia/ BIa -5aB -25
Ia3Ba- W XH UNR paB4a/ aN5 ea 1HaNU2U 1-35WHX5ea
BHa35HN -5aB -25 -B I UW WI UN5ea BXS TR -51-/ aW
-N -N UN5ea MN-2STR -51-/ aW 5eH / e

T 1-35 BHBH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WB H U-5UNWBa UBI XB5eUM HaNU2
U 1-35 a3- W 5ea Ia3Ba- W UN -5aB -25 B W2UN XH
Ia3Ba- WI BpaBXH UW UNB

I MN UN W ea BHa35 U2Ia3Ba- W BpaBXH H apaB apaN
-W UN - HB3- W W5 -5UN eaBa -2HX5ea -5aBI paBaI
5ea BHa35 H 2 e-pa H5aB UW XH aI IH N5B- NaB H
BHa353HN UNW5eaBa H 2 UNHBHN3e-N aWUN 4
3HN BaNB 5UNW-N T 2apa2W eaBaXBa eUa I paBUNW3H
5ea BHa353H 2 3- W 3e-N aWUN -5aB -25 5eU3e-N a
H 2 a UNB-N 2a W5e-NWUNX3-N5

a HN2 WUN ea BHa35 WU 1-35HN -5aB -25 U2 a 2a W
5e-NWUNX3-N5

4g BHa35I paBUNW H 2 Ia3Ba- W XH UNR paB4a/ aN5 UN-
-N NaB5e-53H 2 -Xa35 WI U aN5 SB NWHS

- HaNU2T 1-35 ea BHa353H 2 -Xa35 WI U aN5 SB NWHS

MN UN WE STR XB4-N5 , N R paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/ a

Ia3Ba-WW XH UNRpaB4a/ aN5 ea 1HfaNSU2U 1-35WHX5ea
BHa35HN-Ba IUW WI UN5ea B XSTR -51-/aW SH
-N UN5ea MN2STR -51-/aW 5eH / e

T 1-35 BHBH U-5UN aW5e-NWNU3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHfaNSU2
U 1-35 a3- W 5ea 3e-N a UNWI U aN5BNWH5BaW2SUW XH
Ia3Ba-WI HpaBXH UW UNB

I MN UN W T5UaWU -5aI 5e-51a- XH NaB H BHa35
3HN UNW BN - a-BXHI apaN5 H 2 a 3XWN
5ea HpaBW/ aN5XH U2 Ba SH S 45a5 g Ue
U 12a aN5 UNHX5ea BHa35 1a- XH I BN - a-BXHI
apaN5 H 2 a NH H5 5e-N 3XW a3- W 5ea BHa35
H 2 Ia3Ba-W XH XH 5ea 11aB4-N5 , N -N HN U5W
1HWU2a 5e-55ea Xa aN5 Ue eUe WN 3H 2a -N / Bpa2UW
H UaI -N BNWH5BaI UN5eUBpaBW/ aN53H 2 Ia32Na 5
5ea U 1-35HX5ea BHa35 H 2 a UNBWNBa U2 Ba eUe
UW N-Xa35aI 5ea BHa35 IH UN5aWWI U aN53HNBU 5UN-N
BNWH5 UN5eUBpaBW/ aN5 eaB5Ba 5eUWU 2aW5e-N
WNU3-N5U 1-35

a H2 UN ea BHa35 WU 1-35HNWI U aN5BNWH5 U2 a
2aW5e-NWNU3-N5

4g BHa35I paBWNW H 2 Ia3Ba-W XH UN5ea HpaBXH
U2 Ba SH S 45UN- -NaB5e-53H 2 Ia3Ba-W 5ea pa2BU5 -N
Ia15e HXHpaB-N XH W

- HfaNSU2T 1-35 ea BHa353H 2 Ia3Ba-W 5ea pa2BU5 -N
Ia15e HXHpaB-N XH W Ia3Ba-WW -5aBXH UN5ea HpaB
ea 1HfaNSU2U 1-35WHX5ea BHa35HN5ea pa2BU5 -N Ia15e HX
HpaB-N XH W Ba IUW WI UN5ea B XSTR -51-/a

T 1-35 BHBH U-5UN aW5e-NWNU3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHfaNSU2
U 1-35 a3- W 5ea HpaB-N pa2BU5 -N -5aBIa15e UN5ea HpaB
W/ aN5 a5 aaN5ea U2 Ba HN2 aNa -N RpaB Ua R
H 2 NH5 a 1aBa15U2 -Xa35aI 5ea BHa35

I MN UN W T5UaWU -5aI 5e-55ea UN5 N5-NaH WXH UN4a/ aN5
H 2 a BaI 3aI XH 3XW NaB5ea H BHa35SH
3XW Ue 5ea BHa35 ea HpaB-N pa2BU5 -N -5aBIa15e UN5eUW
W35UNHX5ea 4, R H 2 NH5 a 1aBa15U2 -Xa35aI 5ea
BHa35-N 5eaB5Ba 5eUWU 1-35U2aW5e-NWNU3-N5

MN UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a HN2 WJN ea BHa35 WU 1-35HN5ea pa2BU5 -N Ia15e HX
HpaB-N XH W U2 a 2aW5e-NWUNX3-N5

/ 4-N5 , N RUpaB4a/ aN5S ES 45Ba55HRT RU2Hg -Va -5aB Ba-5 aN5
2N5 5X2W

4g ea BHa35 H 2 Ia3Ba-W BpaBXH -N W3H 2 Ia/BIa -5aB
-25

- HaNu2T 1-35 ea BHa353H 2 Ia/BIa -5aB -25
Ia3Ba-WW XH UNRUpaB4a/ aN5S ea 1HaNu2U 1-35WHX5ea
BHa35HN -5aB -25 -Ba IUW WAI UN5ea BXSSTR -51-/aW
-N -N UN5ea MN2STR -51-/aW 5eBH /e
-N 1-/aW 5eBH /e ,

T 1-35 BHBSh U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UB1 XB5eUMH5aNu2
U 1-35 a3- W5ea Ia3Ba-W UN -5aB -25 BaW20V XH
Ia3Ba-WI BpaBXH UW UNB

I MNUVW ea BHa35 H 2 Ia3Ba-W BpaBXH H apaBapaN
-W UN - HB3-W W5 -5UN eaBa -2HX5ea -5aBI UpaBaI
5ea BHa35 H 2 e-pa H5eaB UW XH aI IH N5Ba- NaB H
BHa353HN UNW5eaBa H 2 UNHBHNH3e-N aWUN 4
3HN5aNB 5UNW-N T 2apa2W eaBaXBa eUa IUpaBUNWXBH
5ea BHa353H 2 3- W3e-N aWUN -5aB -25 5eU3e-N a
H 2 a UNB-N 2aW5e-NWUNX3-N5

a HN2 WJN ea BHa35 WU 1-35HN -5aB -25 U2 a 2aW
5e-NWUNX3-N5

4g BHa35IUpaBUNW H 2 Ia3Ba-W XH UNRUpaB4a/ aN5S UN-
-N5aB5e-53H 2 -Xa35WAI U aN55BNWH5

- HaNu2T 1-35 ea BHa353H 2 -Xa35WAI U aN55BNWH5
Ia3Ba-WW XH UNRUpaB4a/ aN5S ea 1HaNu2U 1-35WHX5ea
BHa35HNWAI U aN55BNWH5 -Ba IUW WAI UN5ea BXSSTR -5
1-/aW 5H -N -N UN5ea MN2STR -51-/aW
5eBH /e

T 1-35 BHBSh U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UB1 XB5eUMH5aNu2
U 1-35 a3- W5ea 3e-N a UNWAI U aN55BNWH5I a 5H BHa35
IUpaBUNWU UNB

I MNUVW T5UaWU -5aI 5e-51a- XH NaB H BHa35
MNUVW ESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be
Tg S4 SR S T T -/a

3HN UNWI BN - a-BXH apaN5 H 2 a 3XWN
 5ea BpaBW/ aN5XH S 45a5HRT RUZH g Ue
 U 12a aN5 UNHX5ea BHa35 1a- XH I BN - a-BXH
 apaN5 H 2 a NH H5 5e-N 3XW a3- W 5ea BHa35
 H 2 Ia3Ba- W XH XH 5ea 11aB4-N5, N -N HN U5W
 1HWU2a 5e-55ea Xa aN5 Ue e3e WN 3H 2a -N /Bpa2UW
 H UaI -N BNWH5aI UN5eUBpaBW/ aN53H 2 Ia32Na 5
 5ea U 1-35HX5ea BHa35 H 2 a UNHWBa U5 -N 2 Na
 3Ba W e3e -Ba N X35aI 5ea BHa35 IH UN5a WIU aN5
 3HNBU UN-N BNWH5UN5eUBpaBW/ aN5 eaB XH 5eUWU
 - 2aW5e-NWNU3-N5U 1-35

a HN2 WJN ea BHa35 WU 1-35HNWI U aN5BNWH5 U2 a
 2aW5e-NWNU3-N5

B. Groundwater Hydrology and Water Quality

BHa35 HNB 35UN

- 4-N5, N RpaB HNB 35UN, Ba-

g a -5aBN I BN BHa353HNB 35UN3H 2 B W2UN5a 1HB B
 2H aBN HX/ BH N -5aB2apa2W aNa-5e a 3-p-5UNW5a

- H5aNU2T 1-35 ea BHa353H 2 B W2UN- 5a 1HB B 2H aBN
 HX/ BH N -5aB2apa2W ea 1H5aNU2U 1-35WHX5ea BHa35HN
 /BH N -5aB2apa2W-55ea a 3-p-5UNW5a -Ba IUW WI UN5ea B X
 STR -51-/ a

T 1-35 BHBSH U5U-5UN aW5e-NWNU3-N5

3 U5U-5UN a-WBa H U5U-5UNUBa UB I XH5eUMH5aNU2
 U 1-35 a3- W I a -5aBN H 2 a 5a 1HB B 2B-2UaI -N
 H 2 NH5I a12a5a /BH N -5aBW112aWHB- X355ea 2B-2- Ba-

I MN UN W a 1HB B -N 2B-2UaI Ia -5aBN I BN BHa35
 3HNB 35UN3H 2 B W2UN- 5a 1HB B 2H aBN HX/ BH N -5aB
 2apa2W aNa-5e 5ea a 3-p-5UNW5a H apaB Ia -5aBN H 2
 NH5B3 BUNpH2 aW WX3I aN55HW W5NU2 Ia12a5a
 /BH N -5aBW112aWHB- X355ea 2B-2- Ba- eaB XH U 1-35W
 HN/ BH N -5aB2apa2W H 2 a 2aW5e-NWNU3-N5

a HN2 WJN ea BHa35 WU 1-35HN/ BH N -5aB2apa2W U2 a
 2aW5e-NWNU3-N5

apU2 -N HN HNB 35UN, Ba-

g a -5aBN I BN 3HNB 35UN3H 2 B W2UN5a 1HB B 2H aBN
 MN UN WE STR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
 -Be
 Tg S4 SR S T T -/ a

HX/ BH N - 5aB2apa2W aNa- 5e a 3-p- 5UHNW5a

- H5aNU2T 1-35 ea BH a353H 2 B aW25UN- 5a 1HBB 2H aBN
HX/ BH N - 5aB2apa2W ea 1H5aNU2U 1-35WHX5ea BH a35HN
/ BH N - 5aB2apa2W-55ea a 3-p- 5UHNW5a - B I U W W I UN5ea B X
STR -51- / aW -N

T 1-35 BHB5H U-5UHN aW5e-NW/NX3-N5

3 U-5UHN a-WB H U-5UHNWB UBI XB5eUM H5aNU2
U 1-35 a3- W I a -5aBN H 2 a 5a 1HBB 2B-2UaI -N
H 2 NH5I a12a5a / BH N -5aBW112aWHB- X5355ea 2B-2- B-

I MNUVW a 1HBB -N 2B-2UaI Ia -5aBN -5a 3-p- 5UHNW5aW
I BN BH a353HN5B 35UHN3H 2 -X5355ea apU -N HN
HN5B 35UHN, B- H apaB Ia -5aBN H 2 NH5B3 BUN
pH2 aWWX3IaN5HW W5NU2 Ia12a5a / BH N -5aBW112aWHB
-X5355ea 2B-2- B- ea B X B U 1-35WHN/ BH N -5aB2apa2W
H 2 a 2aW5e-NW/NX3-N5

a HN2 WUN ea BH a35 WU 1-35HN/ BH N -5aB2apa2W U2 a
2aW5e-NW/NX3-N5

3 5a Ba HN5B 35UHN, B-

g a -5aBN I BN 3HN5B 35UHN3H 2 B aW25UN5a 1HBB 2H aBN
HX/ BH N -5aB2apa2W aNa- 5e a 3-p- 5UHNW5a

- H5aNU2T 1-35 ea BH a353H 2 B aW25UN- 5a 1HBB 2H aBN
HX/ BH N -5aB2apa2W ea 1H5aNU2U 1-35WHX5ea BH a35HN
/ BH N -5aB2apa2W-55ea a 3-p- 5UHNW5a - B I U W W I UN5ea B X
STR -51- / aW -N

T 1-35 BHB5H U-5UHN aW5e-NW/NX3-N5

3 U-5UHN a-WB H U-5UHNWB UBI XB5eUM H5aNU2
U 1-35 a3- W I a -5aBN H 2 a 5a 1HBB 2B-2UaI -N
H 2 NH5I a12a5a / BH N -5aBW112aWHB- X5355ea 2B-2- B-

I MNUVW a 1HBB -N 2B-2UaI Ia -5aBN -5a 3-p- 5UHNW5aW
I BN 3HN5B 35UHN3H 2 -X5355ea 5a Ba HN5B 35UHN
, B- H apaB Ia -5aBN H 2 NH5B3 BUNpH2 aWWX3IaN5
SHW W5NU2 Ia12a5a / BH N -5aBW112aWHB- X5355ea 2B-2
-B- ea B X B U 1-35WHN/ BH N -5aB2apa2W H 2 a 2aW5e-N
W/NX3-N5

a ea BH a35 WU 1-35HN/ BH N -5aB2apa2W U2 a 2aW5e-N
W/NX3-N5

MNUVW ESTR XB4-N5, N R I paBg -5aBRUe5, 1123-5UHNW
-Be

Tg S4 SR S T T -/ a

BHa35 1aB 5UNW-N -UNa-NBa

- 4-N aB-B UNH -WN, Ba-

g BHa35H1aB 5UNW H 2 N5UNaB6Ba Ue / BH N -5aB3e-B a SH1HUN5 eaBa 5eaBa H 2 a - Na5IaX3U5UN- UaBpH2 a Ua 3e-N a UN/ BH N -5aBWB/a

- HaN5U2T 1-35 ea BHa353H 2 UNaB6Ba Ue / BH N -5aB Ba3e-B a -N 3- W- Na5IaX3U5UN- UaBpH2 a ea 1HaN5U2 U 1-35WHX5ea BHa35HN- UaBpH2 a -Ba IUW WAI UN5ea BXS STR -51-/ a

T 1-35 BHBSH UU-5UN aW5e-NWUNX3-N5

3 UU-5UN a-WBa H UU-5UNUBa UBI XB5eUMHaN5U2 U 1-35 a3- W BHa35H1aB 5UNW H 2 N5UNaB6Ba Ue / BH N -5aB3e-B a SH5ea 1HUN5 eaBa 5eaBa H 2 a - Na5 IaX3U5UN- UaBpH2 a

I MNUV W BHa35IpaBWINW H 2 IpaB5 -5aBXH 5ea 4, R eUe H 2 BaI 3a Ba3e-B a UN5ea BpaB3e-Na2 ea 2-3 HX Ba3e-B a UN5ea BpaB H 2 a HXXW5 UN 2a Ba3e-B a 3- W IUBa35Ia2paB HX4, R -5aB eUe BaI 3aWi pa HB1 IUW WB-IUN HX4, R -5aBUNHeaBWBa-IUN / BH N WUN5ea 4-N aB-B UNH -WN, Ba- -N -5aB5 BaI XH a 3e-N aW Ue HeaB-/ aNBaW ea Na5aXa35UWHBa3e-B a 5ea 4-N aB-B UNH -WN, Ba- Ue - W U2-B -N5 HX -5aB- W H 2 HB3 B NaB H BHa353HN 5UNW ea BHa35 H 2 -Xa35HN2 5ea 5U UV -N 2B-5UNHXBa3e-B a TN5aB WHX5ea / BH N -5aB -2Na HX5ea 4-N aB-B UNH -WN, Ba- 5ea WXi la2 HX5ea -WN U2 a -UN5 UNaI 1 BW-N5SH5ea Western I/ aN5 a3- W4, R -5aBI paBWINW H 2 N5BaW5UN- Na5IaX3U5UN - UaBpH2 a U 1-35W H 2 a 2aW5e-NWUNX3-N5

a HN2 WIN ea BHa35 WU 1-35HN- UaBpH2 a U2 a 2aW 5e-NWUNX3-N5

g ea BHa35 H 2 N5UNBa-W 4 -N N5B 5a 3HBaNSB 5UNWUN 5ea W -WNWHX4-N aB-B UNH -WN, Ba- W3e 5e-51HW BHa35 3HBaNSB 5UNW H 2 a 3aal g -5aB -25 a35paWg

- HaN5U2T 1-35 ea BHa353H 2 UNBa-W 4 -N N5B 5a 3HBaNSB 5UNW-N a 3aal g W ea 1HaN5U2U 1-35WHX5ea BHa35HN 4 -N N5B 5a 3HBaNSB 5UNWUN 5ea 4-N aB-B UNH -WN, Ba- -Ba IUW WAI UN5ea BXS STR -51-/ a -N UN 5ea MN-2STR -51-/ aW 5eBI / e

MNUV WE STR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW -Be

Tg S4 SR S T T -/ a

T 1-35 BHBSH UJ-SUN aW5e-NWNU3-N5

3 UJ-SUN a-WB H UJ-SUNUBa UBI XB5eUMH5aNU2
U 1-35 a3- W UWA5eaB2aW5e-NWNU3-N5HB aNaX3U2

I MNUVW HNBaNB SUN2apa2WB 4 H 2 N5a 3aaI 3 BaN5
g WB2apa2W NaB H BH353HN UNWON-N HX5ea W
-WVW e WNHWNX3-N5U 1-35W Ba -N5U-5aI eaBa H 2
a aNaX3U2U 1-35W NaB-2 BH35WaN-BHWON5ea NaB U
T-N NaB U2TW -WVW NaB3 BaN5g W-N UN
NaB U2, NaB1BH1HAI g W aW5e-NWNU3-N5
U 1-35W3H 2 a a 1a35aI UN5ea BaWBa HNa -N 5a W
-WVW MBNB5 5a 3HNBaNB SUN2apa2W aNaX3U2U 1-35W H 2
a -N5U-5aI XB-2W -WVW NaB3 BaN5g W

a HN2 WUN ea BH35WU 1-35HN 4 -N NB5a
3HNBaNB SUNWON5ea W -WVW5ea 4-N aB-BUH -WV, Ba-
U2 a 2aW5e-NWNU3-N5 HB aNaX3U2

C. Biological Resources

BH35 HNB 3SUN

- 4apaN - W - -N RaWpHUB HNB 3SUN, Ba-

T HNB 3SUNBa2-5aI 5HB-2UNW BH-I WON5ea 4apaN - W -
-N RaWpHUB HNB 3SUN, Ba- H 2 BaW5UN-2HWXN-5pa pa/ a5-SUN
-N 5a 1HB B aX35WN3H HN U 2X

- H5aNU2T 1-35 ea BH353H 2 BaW5UN- 2HWXN-5pa
pa/ a5-SUN-N 5a 1HB B aX35WN3H HN U 2X ea
1H5aNU2U 1-35W5ea BH35HNN-5pa pa/ a5-SUN-N 3H HN
U 2X Wa3UaW Ba I U5 WAI UN5ea B XSTR -51-/ aW 5H
-N UN5ea MN-2STR -51-/ a

T 1-35 BHBSH UJ-SUN aW5e-NWNU3-N5

3 UJ-SUN a-WB H UJ-SUNUBa UBI XB5eUMH5aNU2
U 1-35 a3- W UW2aW5e-NWNU3-N5 5 UJ-SUN a-WBaW
T 5eH /e T -WU5 WAI UNW3SUN
HX5ea B XSTR U2X5eaBBI 3a-N U 1-35

I MNUVW NUg aW5aBNe-pa a2U UN-5aI XH 5ea BH355ea
Ba2B-SUNHX- Ua W3SUNHX5ea 4 S -33aWBHI U 1-35W
XH 5eUa2a aN5I U5 WAI UN5ea B XSTR U25eaBaXB NH
2HN aBH3 B Ra2B-SUNHXg -B 41BN W 33aWRHI -N
MNUV WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-SUNW
-Be
Tg S4 SR S T T -/ a

3HNSB 35UNHX5ea Na UN5 a VB 35 Ba -33aWBHI -55ea I-
H 2 BaW25UN2HMHXN-5pa pa/ a5-5UN-N 5a 1HBB aX35WHN
3H HN U 2X Wa3taW ea 2HMHX H5HX5ea 1H5aNU22
U 1-35aI UPH U-2BaWI BaWUN5ea I- -N BaWpHUB-Ba- e-W
1BapUH W aaN1aB U5aI -N U-5aI a3- W-22 UPH U-2
BaWI BaW N aB Xa5 -5UN-2 aH a53 aB3-2 -5
- Ba 3HNW aBaI 2H5-WI-BHX5ea HB/UN-24apaN - W
- XHI 3HNSB21Ba35 5ea Ba35 H 2 N5BaW25UN-N
-I I UUN-2U 1-35W N aB5eUa2ap-5UN T 1-35WHpa/ a5-5UN
a5 aaN5ea XH5a2ap-5UN-N 5ea - U XHI
H N -B HX Xa5e-pa aaN3HNW aBaI 1aBaN52H5-N
U-5aI -W-BHX3HNSB 35UN-N HlaB 5UNHX5ea 4apaN - W
- XHI 3HNSB21Ba35 eaBaXBa U 1-35WHX5ea Ba35-Ba
3HNW aBaI -WB3 BBN HNe-2HX5ea UPH U-2BaWI BaW UeUN
5ea -3BaWHB -3BaW a5H5ea 2H -3Ba-/ aHXU 1-35aI
e- U-5 5ea Ba2-5pa - N-NBa HX3e-11-B2pa/ a5-5UNUN5ea
Ba/ UN-N pUN5 5ea Ba2-5pa - N-NBa UN5ea Ba/ UNHX12N5
-N U 2X Wa3taW WBU5aI Ue 5ea 12N53H N5 -N 5ea
2B-5UNHX5ea U 1-35 UeUN-N-Ba- a 1a35aI SH aIU5 BaI I a
SHBaWpHUBHlaB 5UNW5ea 1aB -NaN52HMHX -3BaWHX3e-1-BB2
H 2 a 2aW5e-NWUNX3-N5

a HN2 UN ea Ba35 WU 1-35HNN-5pa pa/ a5-5UN-N
3H HN U 2X U 2 a 2aW5e-NWUNX3-N5

4-N5 , N RpaB HNSB 35UN, Ba-

T HNSB 35UNHX5ea 2 Na H2 Ua2Na H 2 IU5 B -N
5a 1HBB2 Ba Hpa BU-BUN a52-N -N VBa- e- U-5-N 3- W
HB-25 HX3H HNBUI-BUN U 2X Wa3taW

- H5aNU2T 1-35 ea Ba35 U2IU5 B -N 5a 1HBB2 Ba Hpa
BU-BUN a52-N -N VBa- e- U-5-N 3- W HB-25 HX
3H HNBUI-BUN U 2X Wa3taW ea 1H5aNU2U 1-35WHX5ea
Ba35HNBUI-BUN a52-N -N VBa- e- U-5-N Wa3taWUN5ea
4-N5 , N RpaB HNSB 35UN, Ba- -Ba IU5 WUI UN5ea B XSTR
-51-/ aW -N -N UN5ea MN-2STR -51-/ a

T 1-35 BU5H U-5UN H5aNU22 WUNX3-N5

3 U-5UN a-WBa ea Ba35 U2UNBHEHB 5a U-5UN
a-WBaW T -N T IaWBUaI UN4a35UN
HX5ea B XSTR eUe U2 UN Ua IU5 B -N5a SH
N-5pa e- U-5W-N WNW5pa Wa3taW U 12a aNSUN - WBaWHX
a-WBaW Ue 5ea H a35pa HXBaVHBN -Na -2HB/ Ba- 5aB
- H N5HXBU-BUN-N a52-N e- U-53H 1-BaI SH5e-5U 1-35aI
3HNSB 35UNHX5ea 2 Na H2 Ua2Na a-WBaWHBVB35

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/ a

I US B-NBa UNB2 Ia Ba VSB35UN -35pUaWa2-5aI SHV/ UN
3HNMB 35UN -N a U aN5WB/a -N Ba VSB35UN laBMNa2.5H
a USUN I US B aI -Ba- WH5ea a 5aN5Xa-WU2a ea 2U USWHXea
V/ UN -Ba- W- W a2- W5ea 3HNMB 35UN3HBU HB HNaWUN5ea
Xa2 U a 32a-BE -B aI -N Ia2Na-5aI HN-2XN-23HNMB 35UN
IB UN WB 2 a1BN5W-NI laBMNa2-NI a U aN5 U2 a
1BeUaI UNN-5pa e- U-5WH SWa 3HNMB 35UN2U USW
UHZ U-2 WNW5pa -Ba-WUNB2 I UN UN UaU -2WB3HNaWHX
WNW5pa 12-N5-N U 2Xa Wa3laW U2 a UaN5XaI -N
Ia2Na-5aI UN5ea Xa2 1BHB5H/ BH NI I US B-NBa -N U2 a
32a-BE -B aI / B1eU-2 HN-2XN-23HNMB 35UN12NWMB
2 a1BN5WMI5ea U2 a-pHUaI SH5ea - U a 5aN5Xa-WU2a
a5eHI WH UNU Ua 5ea 3HNMB 35UN3HBU HB U5e SH5ea
- U a 5aN5Xa-WU2a UNWNW5pa e- U-5W U2 a
U 12a aNaI W3e -WB NWHBUN -NI WB 1UN a 3-p-5aI
-5aB/2WUNI US B aI -Ba-WHX5ea BUe5HX - R g HBUNH
H5eaB1-BWHX5ea R g SB 3 HB3Hpa HB a25 , Na 12H aa
SB UNV 1BY B 1BaWN5aI - -2XaI UHZ US U2UNB2 Ia -
I US WWHNXa-3e Wa3laW-2-1123- 2a 2 W5ea laB U
3HN USUNW-NI 5ea 1HaNU21aN-25aWXBpU2-SUN 1aB U
3HN USUNW ea SB UNV 1BY B U2 a U 12a aNaI -N
3HN 35aI aXB 3HNMB 35UN-35pUaWa/ UN Ra/ 2-B 1I-5aW
U2 a 1BpUaI I BN aa 2 5-U-5a aa5UN W Ue 3HNMB 35UN
laBMNa2 , -2XaI UHZ US U2 a-55ea 2B-SUNHXe- U-5
Ba Hp-2 aXB 32a-BN -35pUaW-NI Ba Hp-2HBWlaN5-B
-NU -2W H5e 3H HN-NI WNW5pa UeUN5ea R g 1BHB5H
32a-BN ea UHZ US U2-55a 155HBa Hpa -NU -2W eaBa
pUW2a -N I BN Ba Hp-2-35pUaWaNWBa 5e-5NHUN-IpaBaN5
U 1-35WH-I -3aN5e- U-5WB3 B g aa 2 UNWa35UNWHXea
R g laBU a5aBNa-B HB -Ba-W U2-2WBI 3a 5ea 1HaNU2XB
UN-IpaBaN5U 1-35WH-I -3aN5e- U-5 V3HNBE2 a-WBaW
UNB2 I UN -5aBN 5HBaI 3a 5ea 3Ba-SUNHBI V32HI W U2 a
U 12a aNaI UN-33HB-NBa Ue Ba/ UN-2V-N -BWN aV
-N/a aN5 B353aW 4SB -2aW-N p IU5eaW U2 a
UNV-2aI UN-Ba-W eaBa 3HNMB 35UN-35pUaW - IUBa352 HB
UNUBa352 3- WUNBa-WI aBWHNHBWU aN5I a1HMUNHN
-I -3aN5e- U-5W g aa 2 W5a 32a-N 1W U2Ba Hpa -2BaXW
UNB2 I UN NFN3HNMB 35UN -5aB/2WW3e -WI-1aB-N
U5a2-NaH WXH 1-3 -/UN -5aB/2WXH 5ea R g -N
1BapaN525aBN HX5ea -I -3aN5e- U-5-Ba- WH SWa HX5ea R g
U5aI Wa3laWIB5a35UN a-WBaW U2UNB2 Ia 5ea UNV-2-SUNHX
a 32 WFN-B XNBUN -11BpaI 5ea 4 MW -N g U 2Xa
4aB3a 4Mg 4 SHBaI 3a 5ea 1HaNU2XB4-N aBN-BUNH
-N -BHR-5 4 R aNaBN 5ea R g NUg aVaBN - N5
UNV-2XNBUN UN3aB-UN-Ba-WW3e -W H 2aBVBa N -WaW
eaBa XNBa 3HNMB 35UN - 3- W W V5NU2e- U-5

MN UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

I U S B - N B a M H Z H U N 5 e a U N W 2 2 S U N H X X a N B U N 5 e a - N U - 2 W
 U e U N 5 e a R g U 2 a S B 1 1 a I - N I B a 2 a - W I U e U N - I - 3 a N 5
 W U 5 2 a e - U 5 H 5 W a 5 e a R g e a W a 5 e H I W U 2 - 2 W I a
 - 1 1 B h p a I 5 e a 4 M g 4 T N - B a - W e a B a 5 e a 4 R U M B a W N 5
 a U e a B U e U N H B - I - 3 a N 5 H 5 e a R g N U g a W a B N U 2 2 U U 5
 3 H N M B 3 5 U N - 3 5 p U 5 a W S H I - 2 U e 5 e H B W X H - 1 1 B H U - 5 a 2
 - S H 1 B N N U e 5 e H B W N H - 3 5 p U 5 a W e - 5 H 2
 N N 5 B 2 2 U N B a - W 5 e a 2 U e 5 H B N H U W U e U N - I - 3 a N 5 H B 3 1 1 a I
 e - U 5 U 2 H B 3 B T N - B a - W e a B a 5 e a 4 R - 2 X B N U
 / N 5 - 5 e a B , 2 a - W a 2 W p U a H H B W I 5 e a W a B N U 2 H
 X 3 - 5 e a B - B a 1 B a W N 5 a U e a B U e U N H B - I - 3 a N 5 H 5 e a R g
 N U g a W a B N U 2 - p H U H B B a I 3 a 3 H N M B 3 5 U N - 3 5 p U 5 a W W N 5 e a
 p U 5 U N 5 H X H B 3 1 1 a I e - U 5 I B N 5 e a B a I U N W a - W N X H
 - B e 5 e H / e N a T N 3 a B 5 U N - B a - W - p H U - N B a H X
 W I 5 e a W a B U 2 H X 3 - 5 e a B U 2 3 H N 5 U N a 5 e H / e 2
 g e a B a 3 H 1 2 a 5 a - p H U - N B a U W N 5 1 H W U 2 a 3 H N M B 3 5 U N - 3 5 p U 5 a W
 U 2 a 3 H N 3 5 a I U N - - N a B 5 e - 5 U N U U a W U S B - N B a I B N
 a - B H B N U e H B W N - p H U 5 e a H W W N M 5 p a B a I U N H N e W
 H X 1 B 2 - N - T N - B a - W e a B a 1 B a 3 H N M B 3 5 U N W a N M 5 p a W a 3 a W
 W p a W - N H e a B W - W N 2 2 U U a I - 3 5 p U 5 a W - B a N a a I a I
 N U g a W a B N U 2 1 B a 1 - B a - 3 - 2 a N - B H X e a N W 3 e - 3 5 p U 5 a W N a a I
 S H a - 3 3 H 1 2 U a I - N U N B H I H B 5 a 5 e U W N S H I a W N - N
 3 H N M B 3 5 U N W e a I 2 a W H a N W B a 5 e - 5 e a W p a W 3 - N a 3 H N 3 5 a I
 U N 5 e a - 1 1 B H I B J 5 a W a - W N U e H 5 3 - W N I a 2 - W N U g a W a B N
 U 2 I a p a 2 H I - - U 5 5 R a p a / a 5 - S U N R a W H B 5 U N - N I H N S H B N
 B H B H 5 U N U N I 5 X H - 2 X B N U a I - B a N 5 H X M W - N
 - a M - N I 4 M g 4 X B U 1 2 a a N 5 - S U N U N - 2 e - U 5 - B a - W
 I U B 3 5 2 - X a 3 5 a I 3 H N M B 3 5 U N - 3 5 p U 5 a W e U M B H B U 2
 U N 2 I a a - W B a W X B U p - W p a W a 3 a W 3 H N S B 2 S H I W I 2 W 2 p - / a - N
 B a 1 2 3 a a N 5 - N e - U 5 B a e - U 5 - S U N - N I B a p a / a 5 - S U N e a
 U p - W p a W a 3 a W 3 H N S B 2 a - W B a W U 2 a N W B a 5 e - 5 e a B a
 - 1 1 B H I B J 5 a - N X i - W 2 a 5 e a - B a - S H a I U S B a I U 2 a 5 a - 5 a I S H
 U 2 U p - W p a a H 3 W a 3 a W - N 2 U U 5 e a U B W a 1 B H I 3 5 U N a X B a
 U N 5 U 5 U N - N a - B e H p U N - 3 5 p U 5 U e 5 e a H a 3 5 p a W H X
 1 B a p a N 5 U N U p - W p a W a 3 a W X H W B a - I U N X H 5 e a I U S B - N B a
 - B a - - N I B a H p U N a - W I B a W X H 5 e a W 2 p - / a I S H I W I 2
 a B U U a W U 2 a W I H N 2 - 2 3 a N W I e a B U U a - 1 1 2 3 - S H B - N
 - B a U a N H X 3 - S U N S H 1 B H I a B H N a B M B B a W I B a - / a N B a W
 e a 5 a - 5 a N 5 U 2 a 3 H 1 2 a 5 a I a X B a a - B e H p U N U N H B a B X B
 5 e W U U - S U N S H e - p a U W N 5 a N a I a X a 3 5 a / 5 e a 5 a - 5 a N 5
 H 2 N a a I S H B 3 B a X B a 5 - B a 5 W a 3 a W W 5 W a I T N - B a - W e a B a
 p a / a 5 - S U N - N I W I 2 - B a S H a B a H p a I 5 e a S H I W I 2 U 2 a W 2 p - / a I
 - N B a 1 2 3 a I e a B a 1 B 3 5 3 - 2 a e U W - a - 3 3 H 1 2 U a I W N
 5 H 2 X S W H W 2 p - / a 5 e a W a I - N - N I W 2 p - / a W I 2 - 2 N U e W I 2
 U 5 - U N 5 e a B H 5 H N a 4 H 2 U 2 a W B 1 U 2 a I U N 5 H - B a - W N a - B 5 e a
 B H a 3 5 W a U e 5 e a W a I - N 2 a 2 a I S H U a N 5 X U S H I W I 2 U 2

M N U N W E S T R X B 4 - N 5 , N R I p a B g - 5 a B R U e 5 , 1 1 2 3 - S U N W
 - B e

T g S 4 S R S T T - / a

a B12-3aI UN5ea 1BHaB2- aBW XaBXN-2Ba3HNW B 5UNHX
 IUV B aI -Ba- W g eaBa 1BaWNBa HXa 5aNWpa Ia1HM5WHX H 2aBW
 -N 3H 2aWU U5ea H1HB N5 SHW2-/a SHW2-N - a 5eUW
 1BHaI Ba UNX-W2a NUG aWABN U2W2-/a -p-U 2a WBX3a
 -5aB2-N WB 1Ua U5XBB12-3a aN5HN5ea WBX3a HX5ea
 BaWBaI -Ba- 45B 1UaW U2 a 3HpaBaI UX5ea WU2UWH a 2aX5B
 -Na 5aN aI 1aBHI SH1BapaN52HWW a SHaBWHN-N UNp-WUNHX
 aalW NUG aWABN U2Iapa2HI e- U55Ba- U55UN-N
 Bapa/a5-5UN12-NW-N Wa3UG-5UNWXBB12-N5UN -Ba- W UUV B aI
 5ea BHa35 Ra12-N5UN U2 a Ue N5pa Wa3laWIBH-/-5aI
 XH 2B-22 3H2a35aI WaI HB3 5UN W-N UK-1123- 2a U2
 UN2 Ia WaI HXWNWpa Wa3laW5e-5 H 2 a U 1-35aI I BN
 3HNB 35UN-35pUaW, 11UN-22 HNSHN 1BHaI BaWN
 1aBIB -Nba 3B5aB U2 a Iapa2HlaI NUG aWABN5H
 -11BWWapa/a5-5UN-N aBWHN3HNB2 ea 1aBIB -Nba 3B5aB
 U23HNW aB5ea 2apa2HXI UV B-Nba -N 5ea 3HN UNHX-I -3aN5
 e- U55W HNSHN U23H5UN a XB a-BWHB N52
 1aBIB -Nba 3B5aB e-pa aaN a5, 11BIB5a Ba aI U2
 a-WaWW3e -Wa12-N5UN aBWHN3HNB2HB aal 3HNB2 U2
 a UaN5aI -N U 12a aNaI UXUW a5aB UNaI 5e-51aBIB -Nba
 3B5aB -Ba N5 aUN a5

I MNUV W HNSB 35UNHX5ea 2 Na H2 Ua2Na 3H 2 IUV B
 BI-BUN-N a52-N e- U55 H apaB UNU UNW W3e
 IUV B-Nba 5ea U 12a aN5-5UNHX T -N T
 U2BaI 3a 5eUW 1-35H- 2aW5e-NWUNX3-N52apa2 ea
 XN5UNW-N 5ea p-2 aWHX5ea e- U55H 2 2Ua2 a B12-3aI
 UeUN- Xa a-BW RaW -2U 1-35W H 2 UN2 Ia 5ea 5a 1HB
 2HWHXB-I-BUN a52-N -N W5a- pa/a5-5UN-N U 2X
 e- U55 -N W a N-pHU- 2a H5-25 HX3H HN U 2X
 Wa3laW H apaB U 1-35W H 2 /BI -22 Ia3Ba-W HpaB WpaB2
 a-BW W5ea -Ba- Bapa/a5-5aW-N U 2X 1HI 2-5UNWOBa-W
 , N Ba -UNU U 1-35W U2 a 2aW5e-NWUNX3-N5

a HNB2 WHN ea 1HaNU2U 1-35HX5ea BHa35HNBI-BUN
 a52-N -N W5a- e- U55-N BI-BUN U 2X Wa3laWU2aW
 5e-NWUNX3-N5

T 3HNSB 35UNHX5ea 2 Na H2 Ua2Na H 2 IUV B -N Ba Hpa
 12-N pa/a5-5UN-N U 2X e- U55 UN2 IUV R, M44 -N 3- W
 W/a WB R, M44 -N 3- W H5-25 UN3H HN U 2X Wa3laW

- H5aNU2T 1-35 ea BHa35H 2 IUV B -N Ba Hpa 12-N
 pa/a5-5UN-N U 2X e- U55 UN2 IUV R, M44 -N 3- W
 H5-25 UN3H HN U 2X Wa3laW ea 1HaNU2U 1-35WHX5ea
 BHa35HN 12-N pa/a5-5UN-N U 2X e- U55 UN2 IUV
 R, M44 -N U 2X Wa3laW Ba IUV WAI UN5ea B XSTR -51-/a
 MNUN WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
 -Be

Tg S4 SR S T T -/a

-N UN5ea MN-2STR -51-/aW 5eBH/e -N
5eBH/e

T 1-35 BHBSH UU-SUN HANU22 WNU3-N5

3 UU-SUN a-WB ea BHa35 U2UN8HEHB 5a UU-SUN
a-WB T e3e B UBW NUg aWABNSHB-2UN
1Ua2UNaWH-pHU WNW5pa BAW BAW-N e- U-55H5ea - U
a 5a5Xa-W2a TXUN8HEHB SUNHX T UWNXa-W2a
T UN3H UN-SUN Ue UU-SUN a-WBW T -N
T IawBUal UN4a35UN HX5ea BXSTR -N UN
W35UN HX5ea MN-2STR U2 a U 12a aN5al TN5ea
-2aB-5pa T H 2 B UB 5e-5 NUg aWABN-3 UB
XBapaB HNa -3B U 1-35al - UN HXHNa -3B HX/HH
-25 e- U-5HXW U-BHB/B-5aBe- U-5p-2 a 5e-N5ea R, M4
-B- U 1-35al 5ea 2 Na H2 Ua2UNa -N Ial U-5a UN
1aB1a5 U -W e- U-53HNWp-SUNa-W aN5-B- HBHeaB
-11BHBJ5a IawUN-SUN -N 1BpUa XNUN XBOWX5 B
-N/a aN5-WN-5pa e- U-5UN1aB1a5 U ea -3 UB R, M4
e- U-5-B- H 2 Ua-2 a 3HN5U H W Ue a U5UN e- U-5
-2a-I W5-Wa UN5ea g 4 , HBHeaBlal U-5al R, M4 e- U-5
TX/HH -25 e- U-5UNW3e - 2B-25 UNH5-p-U 2a XB
1 Be-W -p-U U5 HXHeaBR, M4 e- U-5 U2 a UNpaWU-5al
Ue 5ea H a35pa HXH 5-UNUN /HH -25 e- U-5Na-B5ea
BHa35-B- T 12a aN5-SUNHX5eW UU-SUN a-WB U2 a
W a355H5ea B UB aN55e-5W3e 2N 5aB UU-SUN-N
B1H5UN 12-NWXBW3e-3 U5UNW-B SH a -11Bpal 5ea
eLHXH5ea U5UNHXg -5aBRUe5WHX5ea 45-5a g -5aBRaW BAW
HN5H2 H-B 1BHBSH5ea 3HN5B 35UNHX5ea 2 Na H2
Ua2UNa

I MNUNW TN3H UN-SUN Ue T -N T
B2B-5UN e-W THX5ea 2 Na H2 Ua2UNa SH5ea al/a HX5ea
WNV5pa e- U-5-I -3a55H BawNH5RH1 H 2 -pHU
UW35UN 5ea e- U-5 -N H 2 3HNW2U-5a 3HN5B 35UN-35pUaW
-I -3a55Ha U5UN IUS B al -B-W-55ea NH5eaBNaI/a HX5ea
e- U-5 eUBa-2UN aN5HX5ea 1Ua2UNaW U2 1 55ea BHa35
B2-5al IUS B-NBa -55ea al/a HX5ea e- U-5-N -pHU UW35UN
5ea UN5aB al U5a SH -5 B R, M4 e- U-5-2N 5ea aWABN
1H5UNHX5ea -2UN aN5 TX T UWNXa-W2a SHU 12a aN5
5ea BAW -2U 1-353H 2 a 3H 1aNW5al U 12a aN5UN
T e3e U2aX55pa2 1BpUa 5ea W a BAW BAW-N
B1 3a 5ea U 1-35SH a2H 5ea WNU3-NBa 5eBawH2 , N
B1 -UNUN U 1-35W U2 a 2aW5e-NWNU3-N5

a HN2 WUN ea 1H5ANU2U 1-35HX5ea BHa35HN 12-N
pa/a5-SUN-N U2 2Xa e- U-5-N Wa3laWU2aW5e-NWNU3-N5
MNUN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be
Tg S4 SR S T T -/a

T HNSB 35UNHX5ea 2 Na HF2 Ua20Na H 2 IUS B HBA Hpa
NN 2Vai WNW5pa 12-NWWa3laWW3e -W 2 aBW -BIHW 22 -N
-BB WWUNaXH aB-N 5eaUBe- U-5

- HANSU2T 1-35 ea BHa353H 2 IUS B HBA Hpa NN 2Vai
WNW5pa 12-NWWa3laWW3e -W 2 aBW -BIHW 22 -N
-BB WWUNaXH aB-N 5eaUBe- U-5 ea 1HANSU2U 1-35WHX5ea
BHa35HNNH 2Vai WNW5pa 12-N5Wa3laW-N 5eaUBe- U-5-Ba
IUS WAI UN5ea BXSIR -51-/aW -N -N UN5ea
MN-2STR -51-/aW 5eBI /e -N 1-/a

T 1-35 BHBSH U-5UN HANSU22 WNUX3-N5

3 U-5UN a-WBa ea BHa35 U2UN8H HBSa U-5UN
a-WBaW T UN4a35UN HX5ea BXSIR UN
-II UNSH T T -N T eUe U2
UNU Ua 5ea e- U-5-Ba U 1-35ai 1BpUa XBe- U-5BaVHBSUN
a-WBaWX3U5-5a -pHU-NBa HB UNU U-5UNHX3HNSB 35UN
U 1-35WHNNH 2Vai WNW5pa 12-N5Wa3laW-N BaVHBA
1HI 25UNW-N e- U-5 eaBa 3HNSB 35UNU 1-35W-Ba
NpHU- 2a ea U-5UN a-WBaW U2-2M3HNWU-5a 5ea
3HNSB 35UN-35pUaW-I -3aN55Ha USUN IUS B-NBa -55ea
NH5eaBaI/a HX5ea e- U-5-N BaI 3a 5ea IUB35-N UNUB35
U 1-35WH5eaW Wa3laW

I MNUVW a5eaB 2 aBW -BIHW 22 NHB -BB WWUNaXH aB
-WH WpaI UNBa3aN2 IUS Bai -Ba-W eUe W//aVW5e-5
WH5 5aB Ba3HpaB HX5ea Wa3laW-N e- U-55H1Ba IUS B-NBa
2apa2WCW NUA2 H apaB 5ea 3H UNaI U 12a aN5 5UNHX
T T T -N T U2BaI 3a
U 1-35WHNNH 2Vai WNW5pa 12-N5Wa3laW5H2a W5e-NWNUX3-N5
1BpUUV XBe- U-5BaVHBSUN a-WBaW, N Ba -UNUV
U 1-35W U2 a 2aW5e-NWNUX3-N5

a HN2 WHN ea 1HANSU2U 1-35HX5ea BHa35HNNH 2Vai
WNW5pa 12-N5Wa3laW-N 5eaUBe- U-5UW2aW5e-NWNUX3-N5

T HNSB 35UNHX5ea 2 Na HF2 Ua20Na 3H 2 IUS B HBA Hpa
e- U-51HANSU22 HB3 1lai 2Vai U 20a Wa3laWUB2 IUV 5ea ,
-N 5ea 4 R

- HANSU2T 1-35 ea BHa353H 2 IUS B HBA Hpa e- U-5
1HANSU22 HB3 1lai 2Vai U 20a Wa3laWW3e -W , -N
4 R ea 1HANSU2U 1-35WHX5ea BHa35HNe- U-51HANSU22
HB3 1lai Uai g U 20a 41a3laWUB2 IUV 5ea , -N 5ea
4 R-Ba IUS WAI UN5ea BXSIR -51-/a -N UN5ea
MN-2STR -51-/a

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

T 1-35 BHBSH USU-SUN aW5e-NWUNX3-N5

3 USU-SUN a-WBa H USU-SUNUBa UBI XB5eUMH5aNSU2
U 1-35 5 USU-SUN a-WBaW T T
T -N T IU5 WAI UNW35UNW -N
HX5ea BXSSTR -N UN4a35UN HX5ea MN2STR -Ba
Ba3H aNaI SHXBeaBBI 3a 5ea 2aW5e-NWUNX3-N5U 1-35W

I MNUVW, 2eH/e 5ea e- U55 1a aUV Ba HpaI XB5ea e-WT
-N e-W TIT1Ua2Na W/ aN5WUW aNaB22 NH N5HW11H55ea
3H W2, -N 5ea 4 R 5ea e- U55 U5eUN5ea -Ba- HXU 1-35
UWH2H 5H H1aB5a -25 MB WAI Wpa WXB H5e Wa3laW
aBa 3HN 35aI UN -N BaW2aI UNNH Wp- SUNWHB-N
UN U-SUNHXa5eaBWa3laW1BaWNa U5eUNHB-I -3aN55H5ea
2 Na H2 Ua2Na 3HBUHB TN-II UN 5ea, Ua 5a a2
Ba UN5ea Ba/ UN-N NH BaI UN 1-UBW5e-pa aaNB3HB aI XB
5ea -Ba- MBeaB W5a Wa3UX UNXB -SUN/-5eaBaI I BN
N aBH W5 I laW3HN 35aI -Wl-B HX5ea BHa35UN U-5aW5e-55ea
2 Na H2 Ua2Na 3HBUHB -Ba- UN N2Ua2 5H a aW5NSU25H
4 R HB, 3HNWp-SUN ea U 1-35U2aW5e-NWUNX3-N5
1BHBSH USU-SUN-N XBeaBBI 3aI X2H UN USU-SUN

a HN2 WUN ea BHa35 U2e-pa - 2aW5e-NWUNX3-N5U 1-35HN
e- U551H5aNSU2 HB3 1laI 2U5aI U 2Xa Wa3laW

T HN5B 35UNHX5ea 2 Na H2 Ua2Na 3H 2 IU5 B HBa Hpa
e- U551H5aNSU2 HB3 1laI NHN 2U5aI WNW5pa U 2Xa Wa3laWW3e
-W5ea BH UN H 2-N 5ea 4-N la/ HeHBaI 2U-B

- H5aNSU2T 1-35 ea BHa353H 2 IU5 B HBa Hpa e- U55
1H5aNSU2 HB3 1laI NHN 2U5aI WNW5pa U 2Xa Wa3laW ea
1H5aNSU2U 1-35WHX5ea BHa35HNe- U551H5aNSU2 HB3 1laI
2U5aI U 2Xa Wa3laWW3e -W5ea BH UN H 2-N 5ea 4-N
la/ HeHBaI 2U-B -Ba IU5 WAI UN5ea BXSSTR -51-/a

T 1-35 BHBSH USU-SUN aW5e-NWUNX3-N5

3 USU-SUN a-WBa H USU-SUNUBa UBI XB5eUMH5aNSU2
U 1-35 5 USU-SUN a-WBaW T T -N
T IU5 WAI UNW35UN HX5ea BXSSTR U2XB5eaB
BaI 3a 5ea U 1-35W

I MNUVW HN5B 35UNHX5ea 2 Na H2 Ua2Na 3H 2 IU5 B
HBa Hpa e- U551H5aNSU2 HB3 1laI NHN 2U5aI WNW5pa
U 2Xa Wa3laWW3e -W5ea BH UN H 2-N 5ea 4-N la/ H
eHBaI 2U-B HI 2SUNWHX5eaW Wa3laWeH apaB -Ba/ aNaB22
N5-W2HB-2UaI HBBa -W2U5aI 5Ba-5aNaI HBaNI -N aBaI Wa3laW

MNUVW ESTR XB4-N5, N R5paBg -5aBRUe5, 1123-SUNW
-Be

5e-5-Ba-XXH aI 1BHa35UIN NaBw5a-N XaI aB2W5 5aW e W
2HWXUIN U -2WVNH5a 1a35aI SHW V5N5U22 -Xa35Ba/ UIN-2
1HI 25UINW ea 5a 1HB B 2HWXUe- U-5 1HFaNU2 HB-25 HX-
Xa UIN U -2W-N UIN Ua35aXa35WHX3HNMB 35UINHN-I -3aN5
e- U-5 H 2 a-N-IpaBw 52aW5e-NW/NU3-N5U 1-35SH
Ba/ UIN-21HI 25UINWHXNHN 2V5aI V5NW5pa Wa3laW

a HN2 UIN ea BHa35 U2e-pa - 2aW5e-NW/NU3-N5U 1-35HN
e- U-5 1HFaNU2 HB3 1aI NFN 2V5aI U 2Xa Wa3laW

T HNB 35UINHX5ea H MH HNa35HB Ua2Na H 2 IUW B
-N Ba Hpa 12-N pa/a5-UIN-N U 2Xa e- U-5-N 3- W HB-25 U
3H HN U 2Xa Wa3laW

- HFaNU2T 1-35 ea BHa353H 2 IUW B -N Ba Hpa 12-N
pa/a5-UIN-N U 2Xa e- U-5-N 3- W HB-25 U3H HN
U 2Xa Wa3laW ea 1HFaNU2U 1-35WHX5ea BHa35HN 12-N
pa/a5-UIN-N U 2Xa e- U-5I a 5H3HNMB 35UINHX5ea H
MH HNa35HB Ua2Na -Ba IUW W5I UN5ea BXSIR -51-/a

T 1-35 BHB5H U-5UIN aW5e-NW/NU3-N5

3 U-5UIN a-WBa H U-5UINUBa UaI XB5eUMHFaNU2
U 1-35 5 U-5UIN a-WBaW T -N T
IUW W5I UNW35UIN HX5ea BXSIR U2 a
U 12a aNaI SHXBeaBaI 3a 5eaW 2aW5e-NW/NU3-N5U 1-35W

I MN UN W HNB 35UINHXW/ a5WNH5 UeUN5ea 2 Na H2
Ua2Na H 2 BaW25UN5ea 5a 1HB B Ba Hp-2HXBH /e2 -3BaW
HXIBU -B2 5aBaV5U2 12-N e- U-5 ea - HB5 HX5eUW- U-5
-W5apUH V IUW BaI 3HNMB 35UINHX4apaN - W -
ea IH N5Ba- aN HX5ea 1Ua2Na H 2 3BHW-Na U5UN
N- aI 3e-Na25H3HN355H5ea a U5UN BaNW5 Ua2Na
MH W-Ba N5e IB2H U-22 HBe IB 23-22 3HN35aI 5H-N
H5eaBa aBaN5/ BH N -5aBHBW53a -5aB eUW5e-Na2UW
2Ua2 SHW11HB5HN2 W-22N aBWHX3H HN U 2Xa Wa3laW
a3- W U5UW UaI UN5Wa 5aN5 W11HBWZH -25 e- U-5
Ba3aUaW -5aBXH -Na U5UN W5BaWX1UaW-N -5aB
1aBH2 5aW5NH5ea 4, R UeUNWpaB2e N BaI Xa5HX5ea 4 S
1H aB5H W HNB 35UINHX5ea H MH HNa35HB Ua2Na
H 2 -2W5BaW25UN5a 1HB B I Ua35-N UIN Ua35U 1-35WH
3H HN U 2Xa Wa3laW5B3 BBN UeUN-N -I -3aN5SH5ea
R g H apaB 5ea 2HWX U 2Xa e- U-5 -N HB-25 SH
3H HN U 2Xa Wa3laW-Ba 3HNW5aBaI 5H a 2B-2UaI -N HX
UN5BU 1HB5-NBa a3- W H5HX5ea -Ba- U5a 1a35aI SHW11HB5
HN2 5ea H5 U U5H W U 2Xa Wa3laW5HX5ea -Ba- I a 5H5ea

MN UN WESTR XB4-N5, N R5paBg -5aBRUe5, 1123-UINW
-Be

Tg S4 SR S T T -/a

1HB -25 HX5ea e- U-5 HNB 35UNHX5ea Xa5HX H
MH HNa35HB Ua2Na NH5UN5ea 2 N a H2 Ua2Na 3HBUHB
H 2 -Xa35- H 5 -3BW-WW UY - 3HNB 35UN3HBUHB
Xa5 Ua 4UBa 5ea 3HBUHB H 2 UB2 Ia 5ea -33aWBH I 5H
4apaN - W - 5ea -35 -2e- U-5IU5 B-NBa H 2 a 32HWBSH
-3BW a3- W H5HX5ea -Xa35aI e- U-5e- W aaNBa3aN2
IU5 BaI -N Ba pa/ a5-5aI XB2aW5e-N a-BWe-W2U 5aI e- U-5
p-2 a -N UWBH NaI H5aBI U5 BaI e- U-5 5ea 5a 1HB B
3HNB 35UNU 1-35WNpa/ a5-5UN U 2Xa e- U-5 -N
1HI 2-5UNWH3H HN U 2Xa Wa3laW H 2 a 2aW5e-N
W/NX3-N5 T 1-35WUB2 IU5 W5H5 5aB 2HWXpa/ a5-5UN-N
U 2Xa e- U-5-N 2B-2UaI W5H5 5aB BaI 35UNWN1HI 2-5UNW
HX3H HN U 2Xa Wa3laW H 2 a 2aW5e-NW/NX3-N51B5SH
U5-5UN-N X5eaBaI 3aI X2H UY U5-5UN ea e- U-5
-W a22-W2B-2 U 2Xa 1HI 2-5UNW H 2 2Ua2 B3HpaB5H5eaUB
1BaWN53HN U5UN U5UN- Xa a-BW

a HN2 WUN ea BHa35 U2e-pa - 2aW5e-NW/NX3-N5U 1-35HN
12N pa/ a5-5UN-N U 2Xa e- U-5

T HNB 35UNHX5ea H MH HNa35HB Ua2Na 3H 2 IU5 B HB
Ba Hpa e- U-51HaNU2 HB3 1laI NHN 2U5aI WNW5pa U 2Xa
Wa3laW

- HaNU2T 1-35 ea BHa35H 2 IU5 B HBa Hpa e- U-5
1HaNU2 HB3 1laI NHN 2U5aI WNW5pa U 2Xa Wa3laW ea
1HaNU2U 1-35WHX5ea BHa35HNe- U-51HaNU2 HB3 1laI
NHN 2U5aI WNW5pa U 2Xa Wa3laW a 5H3HNB 35UNHX5ea H
MH HNa35HB Ua2Na -Ba IU5 WaI UN5ea B XSTR -51-/a

T 1-35 B5SH U5-5UN aW5e-NW/NX3-N5

3 U5-5UN a-WBa H U5-5UNUBa UBaI XB5eUM HaNU2
U 1-35 5 U5-5UN a-WBaW T T -N
T IU5 WaI UNW35UN HX5ea B XSTR U2X5eaB
BaI 3a 5eaW U 1-35W

I MN UY W HNB 35UNHX5ea H MH HNa35HB Ua2Na 3H 2
IU5 B HBa Hpa e- U-51HaNU2 HB3 1laI NHN 2U5aI
WNW5pa U 2Xa Wa3laW, 11HI U -5a2 Xa5HX5ea
XH5 H MH HNa35HB Ua2Na H 2 a 3HNB 35aI H 5WJa
5ea e- W TIT 2 N a H2 Ua2Na 3HBUHB H5HX5ea N-5pa
e- U-51HIHWI XBBa Hp-2-N -I -3aN5 -Ba -W Ba IH UN-5aI
2H -25 RpaBWA-NW/a WB R44 -N -Ba 2Ua2 SHW11H5
-W -22N aBHXUN pu -2WHXNH 2U5aI WNW5pa U 2Xa
Wa3laW HN 2U5aI WNW5pa Wa3laW HaNU2 HB3 B5UN UN5ea

MN UY WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

-Ba- UNB2 Ia 2H / aBa-I WBUa 23 3eUNNaI W-BBH -N 5ea
4-N aB-B UNH H N5-UN UN W- a TN-II UNH5H5a 1HB B
2HWXe- U-5 BHa353HNMB 35UN H 2 BaW25UNW a
N-pHU- 2a H5-25 HXN-N UNaI WNWUpa U 2Xa Wa3laWON5ea
R g -N IUW B U 2Xa UN-I -3aN5e- U-5W H apaB 5eUW
U 1-35UNH5a 1a35aI 5HW W-N5U2 -Xa35Ba/ UN-21HI 2-5UNW
HXN-N UNaI WNWUpa Wa3laW ea U 1-35Ba1BaWNSW-N-IpaB
52aW5e-NWUNX3-N5U 1-35 a3- W 1HI 2-5UNW HXN-N UNaI
WNWUpa Wa3laW Ba N55 1U-22 -WUW2-5aI -WUNaI Wa3laW-N
5ea - H N5HXe- U-55H a -Xa35aI UW UNU -2-N HBHX2H
-25

a HN2 WUN ea BHa35 U2e-pa - 2aW5e-NWUNX3-N5U 1-35HN
e- U-51HaNU2 HB3 1aI N-N UNaI WNWUpa U 2Xa
Wa3laW

T HNB 35UNHX5ea H5HN -N HN HNa35HBT Ua2Na H 2
IUW B -N Ba Hpa 12-N pa/a5-5UN-N U 2Xa e- U-5-N 3- W
H5-25 HX3H HN U 2Xa Wa3laW

- HaNU2T 1-35 ea BHa353H 2 IUW B -N Ba Hpa 12-N
pa/a5-5UN-N U 2Xa e- U-5-N 3- W H5-25 HX3H HN
U 2Xa Wa3laW ea 1HaNU2U 1-35WHX5ea BHa35HN 12-N
pa/a5-5UN-N U 2Xa e- U-5-N U 2Xa Wa3laW a 5H5ea
3HNMB 35UNHX5ea H5HN -N HN HNa35HBT Ua2Na -Ba
IUW WAI UN5ea B XSTR -51-/ a

T 1-35 BUBSH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBaI XB5eUMHaNU2
U 1-35 5 U-5UN a-WBaW T -N T
IUW WAI UNW35UN HX5ea B XSTR U2XBeaBaI 3a
5eaW U 1-35W

I MN UN W HNB 35UNHX5ea H5HN -N HN HNa35HBT H 2
BaW25UNBa Hp-2HXpa/a5-5UN-N U 2Xa e- U-5-N H5-25 HX
UN pU -2WHX3H HN U 2Xa Wa3laW 2N UW-11BH U -5a2
XH5-2UN aN5 ea -Xa35aI pa/a5-5UN3HNW5W HNB HX
B IaB2pa/a5-5UN-N - paB W -22- H N5HXIUW BaI R, M44
R44 -N BI-BUNWB 5e-5UWH UN 5aI W-55aBaI 2aX5
12N5W BHa353HNMB 35UN H 2 -2WBaW25UNW a U 2Xa UN
-I -3aN5e- U-5WUNB2 IUW a2Iapa2H aI BI-BNe- U-5UN
H5HN -N HN , W UN - XH5 Ua 3HNMB 35UNR g
-11BH U -5a2 -3BaW5e- U-5 H 2 a U 1-35aI I BN 5ea
UNW-2-5UNHX5eUM Ua2Na H a52-N pa/a5-5UN H 2 a
IUB352 -Xa35aI a3- W HX5ea UNU -2- H N5HXN-5pa e- U-5
IUW B-NBa -N 5ea 2H N aBHX-NU -2WUa2 5H a -Xa35aI

MN UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

5ea HpaB 2U 1-35HNpa/a5-SUN-N U 2X H 2 a 2W5e-N
W/NX3-N5 M2H UN U-5UN 2W5e-NW/NX3-N5U 1-35W
UN2 I UV W/H5 5aB 2HWHXpa/a5-SUN-N U 2X e- U-5-N
2B-2UaI W/H5 5aB BaI 35UNWON1HI 2-5UNWHX3H HN U 2X
Wa3laW H 2 a XBeaBBI 3aI ea e- U-5-W a22-W2B-2
U 2X 1HI 2-5UNW H 2 a a 1a35aI 5HB3HpaB5H5eaUB1BaWN5
3HN SUN UeUN- X a-BW

a HN2 WIN ea BHa35 U2e-pa - 2W5e-NW/NX3-N5U 1-35HN
12N pa/a5-SUN-N U 2X e- U-5

T HNB 35UNHX5ea H5HN -N HN HNa35HB Ua2Na
3H 2 I UV B HBa Hpa e- U-51HaNSU2 HB3 1aI N-N 2Vai
WNW5pa U 2X Wa3laW

- HaNSU2T 1-35 ea BHa35H 2 I UV B HBa Hpa e- U-5
1HaNSU2 HB3 1aI N-N 2Vai WNW5pa U 2X Wa3laW ea
1HaNSU2U 1-35WHX5ea BHa35HNe- U-51HaNSU2 HB3 1aI
N-N 2Vai WNW5pa U 2X Wa3laW a 5H3HNB 35UNHX5ea
H5HN -N HN HNa35BTT Ua2Na -Ba I UV Wai UN5ea B X
STR -51-/a -N

T 1-35 BHB5H U-5UN aW5e-NW/NX3-N5

3 U-5UN a-WBa H U-5UNUBa UaI XBeUMH5aNSU2
U 1-35 5 U-5UN a-WBaW T T -N
T U2XBeaBBI 3a 5eaW U 1-35W

I MN UN W HNB 35UNHX5ea H5HN -N HN HNa35BTT
Ua2Na 3H 2 I UV B HBa Hpa e- U-51HaNSU2 HB3 1aI
N-N 2Vai WNW5pa U 2X Wa3laW eaW Wa3laW - UN2 Ia
5ea 2H/aBa-I WBUa 4-N la/H HIB5 -N 4-N aB+B UNH
H N5-UN UN W a TN-II SUNSH5a 1HB B 2HWHXe- U-5
3HNB 35UN H 2 BaW2UNW a NpHU- 2a H5-25 HX
UN U -2WHX5eaW WNW5pa Wa3laWON5ea R g -N 5a 1HB B
I UV B-NBa SHUN U -2WON-I -3aN5e- U-5W a3- W
1HI 2-5UNWHXNHN 2Vai WNW5pa Wa3laW-Ba N55 1U-22 UW2 5aI
-W2Vai Wa3laW-NI 5ea - H N5HXe- U-55H a-Xa35aI UV
UNU -2-N 2H UN -25 5eUU 1-35UNH5a 1a35aI 5H
W V-N5U2 -Xa35Ba/ UN-21HI 2-5UNWHXNHN 2Vai Wa3laW-N
Ba1BaWN5W-N-IpaBa 52W5e-NW/NX3-N5U 1-35 U-5UN
a-WBaW U2XBeaBBI 3a 5eaW U 1-35W

a HN2 WIN ea BHa35 U2e-pa 2W5e-NW/NX3-N5U 1-35WN
e- U-51HaNSU2 HB3 1aI N-N 2Vai WNW5pa U 2X
Wa3laW

apQ -N HN HNSB 35UN, Ba-

T HNSB 35UNHX apQ -N HN -VW Ua2Na H 2 IUS B HBB Hpa 12-N a2-N BI-BJNpa/a5-5UN-N U 2X e- U-5 -N 3- W H5-25 UN3H HN U 2X Wa3laW

- HANSU2T 1-35 ea BHa35H 2 IUS B HBB Hpa 12-N a2-N BI-BJNpa/a5-5UN-N U 2X e- U-5-N 3- W H5-25 UN3H HN U 2X Wa3laW ea 1HANSU2U 1-35WHXea BHa35HN 12-N a2-N BI-BJNpa/a5-5UN-N U 2X e- U-5 -N 3H HN U 2X Wa3laW-Ba IUS WAI UN5ea BXSSTR -5 1-/a

T 1-35 BUBSH USU-5UN HANSU2 WUNX3-N5

3 USU-5UN a-WBa ea BHa35 UUNBHEH B5a USU-5UN a-WBaW T -N T UN4a35UN HX5ea BXSSTR eUe UaNBa 5e-55ea e- U-5-W a2-WaB-2 U 2X 1HI 2-5UNW UBa3HpaB5H1Ba BHa353HN USUNW UeUN- Xa a-BW

I MNUV W MZH UN 3H 125a Ba Hp-2I a 5H5ea UN5-2-5UNHX-1Ua2Na XB-NH5eaB1BHa35 5ea e- U-5W-N 1HI 2-5UNW5e-5 H 2 a-Xa35aI -55ea apQ -N HN HNSB 35UN, Ba- Ba/aNaB 5aI UeUN- Xa a-BW5H5eaUB3 BANSW-5a 75UW5eaBaXB a 1a35aI 5e-5 Ue USU-5UN 5ea e- U-5-N 2B-2 U 2X 1HI 2-5UNW H 2 W U-2-B Ba3HpaB5H5eaUB1BaWNS3HN USUN UeUN- Xa a-BW XaB5ea BHa35 a3- W 5ea BHa35 H 2 3BWW-1BUN/a -N 1HANSU2 a2-N W-1BBaWWhpaB eUe H5 5ea 4, S -N 5ea M e-pa Ba/ 2-5B - 5HB5 H5eaB-35UNW BaW2UN XH 3H5UN-5UN Ue 5eaW-/aN5laW - -2M a U 12a aN5aI , N Ba -UNU U 1-35W U a 2aW5e-NWUNX3-N5

a HN2 WUN ea 1HANSU2U 1-35HX5ea BHa35HN 12-N a2-N -N BI-BJNpa/a5-5UN-N 3H HN U 2X Wa3laWCW 2aW5e-NWUNX3-N5

T HNSB 35UNHX5ea apQ -N HN 1-VW Ua2Na 3H 2 IUS B e- U-51HANSU2 HB3 1laI 2XaI -N NHN 2XaI WNW5pa U 2X Wa3laW

- HANSU2T 1-35 ea BHa35H 2 IUS B e- U-51HANSU2 HB3 1laI 2XaI -N NHN 2XaI WNW5pa U 2X Wa3laW ea 1HANSU2U 1-35WHX5ea BHa35HN 2XaI -N NHN 2XaI WNW5pa U 2X Wa3laW a 5H3HNSB 35UNHX5ea apQ -N HN -VW Ua2Na -Ba IUS WAI UN5ea BXSSTR -51-/a

T 1-35 BUBSH USU-SUN aW5e-NW/NX3-N5

3 USU-SUN a-WBa H USU-SUNUBa UBI XB5eUMHFaNSU2
U 1-35 5 USU-SUN a-WBaW T T -N
T IUS WAI UNW3SUN HX5ea BXSSTR U2XB5eaB
Ba 3a 5eaW 2aW5e-NW/NX3-N5U 1-35W

I MNUVW ea e- U-51BH HAI XBBa Hp-2UWW-Ba2 pa/a5-5aI
-N NUa2 SHW11H5- UaI IpaBWS HX U 2Xa Wa3laW
-2eH / e - Xa NHN 2V5aI WNW5pa Wa3laW5e-5-Ba HB 3H HN
UN5ea Ba/UN W3e -W5ea B XI W3BH NaI W-BH -N 5ea NHB5aBN
Ba IU HN B52aW a - HB3-WHN-2 XIB/a UeUN5eUW
Ba353HN5B 3SUN-Ba- ea 5a 1HB B 2HWHXe- U-5
IUS B-NBa HXUN IpaU -2WONWBH N UN e- U-5-Ba-W-N
1HFaNSU2 H5-25 HXUN IpaU -2WHXNH 2V5aI WNW5pa Wa3laW
H 2 a 2B-2UaI Ue Xa UN IpaU -2WUa2 SH a-Xa35aI I a SH
5ea 1HB -25 HX H5HX5ea e- U-5 a3- W 1HI 2SUNWHX
NHN 2V5aI WNW5pa Wa3laW-Ba N55 1U-2 -WUW2-5aI -W5eHAI HX
2V5aI Wa3laW 2HWHXUN IpaU -2WONH5a 1a35aI SHW W5N5U2
-Xa35Ba/UN-21HI 2SUNW-N Ba1Ba W5W-N-IpaBWI 52aW5e-N
W/NX3-N5U 1-35 eaWU 1-35W-Ba a 1a35aI SH a XBaB
Ba 3aI X2H UN USU-SUN

a HN2 WUN ea Ba35WU 1-35HNe- U-51HFaNSU2 HB3 1IaI
2V5aI -N NHN 2V5aI WNW5pa U 2Xa Wa3laW U2 a 2aW5e-N
W/NX3-N5

I 52a Ba HN5B 3SUN, Ba-

T HN5B 3SUNHX5ea H aB 52a Ba Ua2Na H 2
IUS B HBBa Hpa 12-N pa/a5-SUN-N U 2Xa e- U-5-N 3- W
H5-25 UN3H HN U 2Xa Wa3laW

- HFaNSU2T 1-35 ea Ba353H 2 IUS B HBBa Hpa 12-N
pa/a5-SUN-N U 2Xa e- U-5-N 3- W H5-25 UN3H HN
U 2Xa Wa3laW ea 1HFaNSU2U 1-35WHX5ea Ba35HN 12-N
pa/a5-SUN-N U 2Xa e- U-5-N U 2Xa Wa3laW a SH
3HN5B 3SUNHX5ea H aB 52a Ba Ua2Na -Ba IUS WAI UN5ea
BXSSTR -51-/a

T 1-35 BUBSH USU-SUN aW5e-NW/NX3-N5

3 USU-SUN a-WBa H USU-SUNUBa UBI XB5eUMHFaNSU2
U 1-35 5 USU-SUN a-WBaW T -N T
IUS WAI UNW3SUN U2XB5eaBBaI 3a 5eaW 2aW5e-N
W/NX3-N5U 1-35W

I MNI UV W HNSB 35UNHX sea H aB 5a Ba Ua20Na H 2
IUV B HBB Hpa 12-N pa/a5-5UN-N U 2X e- U-5-N 3- W
HB-25 UN3H HN U 2X Wa3laW HWHXea -2UN aN5HX
seUMBIHWI 1Ua20Na HB3 BW UseUNsea Npa/a5-5aI BFI -
WH 2 aBHXRPaBWA , paN a -N -5sea 1BHIHWI W/UV -Ba-
aWwe-N -3Ba HXN-5pa pa/a5-5UNW H 2 a IUV Bai -5sea
WI seaBNaN HXsea 1Ua20Na 3HBBHB-I -3aN5SHsea MN5-N H aB
2N5 eUwe- U-5UVI -3aN5SHIUV Bai -Ba-W 5-52a-WWI a
HXU-11a-BWH3HN5 UNWa2 aN5WXR, M4 HBR44 e- U-5 He
HX e3e -Ba M eUeaW1BHB5 3H N5laW eaWe- U-5
5 1aW-Ba 1Bp-2aN5UNa-B NUV Bai -Ba-WN5ea -2 pU2XN
-N seaW 3H N5laW-Ba 2Ua2 SHW11HB5- p-Ba5 HX3H HN
U 2X Wa3laW H apaB 1HI 2-5UNWUNseUW-Ba- -Ba 2Ua2
Ia1BaWai I a SHsea -35pU5aWHe -NW3-5W-N IH WNHUW -N
N/e5U a 2Ue5UW /paN5WZB-5UNU aiU5a2 -I -3aN5SH-
1H aB12N5 BFI - -N eH WV Iapa2HI aN5W TN-11UUNSH
sea e- U-52HW3HNSB 35UN H 2 2Ua2 BaW2UN HB-25 HX
UN paW -2WHX3H HN U 2X Wa3laW ea 5a 1HBB
3HNSB 35UNU 1-35WNP/a/a5-5UN U 2X e- U-5 -N
1HI 2-5UNW3H HN U 2X Wa3laW H 2 a 2aWwe-N
W/NX3-N5 a3- W sea -Xa35aI e- U-51-5eaW-Ba W -2
IUV Bai -N -I -3aN55Ha UVUW Iapa2HlaI -Ba-WseaUBp-2 a SH
U 2X U2U 5aI

a HN2 WIN ea BHa35WU 1-35HN 12N pa/a5-5UN-N
U 2X e- U-5 U2 a 2aWwe-NW/NX3-N5

T HNSB 35UNHX sea H aB 5a Ba Ua20Na 3H 2
IUV B HBB Hpa e- U-51H5aNU2 HB3 1laI NFN 2V5aI WNW5pa
U 2X Wa3laW

- H5aNU2T 1-35 ea BHa353H 2 IUV B HBB Hpa e- U-5
1H5aNU2 HB3 1laI NFN 2V5aI WNW5pa U 2X Wa3laW ea
1H5aNU2U 1-35WHXsea BHa35HNe- U-51H5aNU2 HB3 1laI
NFN 2V5aI WNW5pa U 2X Wa3laW a SH3HNSB 35UNHXsea
H aB 5a Ba Ua20Na -Ba IUV Wai UNsea BXSSTR -51-/aW
-N

T 1-35 BHB5H U-5UN aWwe-NW/NX3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XBeUMH5aNU2
U 1-35 5 U-5UN a-WBaW T T -N
T IUV Wai UNW35UN HXsea BXSSTR H 2 XBeaB
BaI 3a seaW 2aWwe-NW/NX3-N5U 1-35W

I MNI UV W - U-51BHIHWI XBBa Hp-2UW2Ua2 SHW11HB5 WpaB2
NFN 2V5aI WNW5pa U 2X Wa3laW ea e- U-5UWZB-5aI

MNI UV WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

-I -3aN5Hea-pU IUV BaI -Ba-W5e-5-Ba NUa2 SHW11H5-
Ua IpaBWS HX U 2Xa Wa3laW H apaB 5ea e- U-5 -
1HaNSU2 W11H5- Xa NHN 2V5aI VNW5pa U 2Xa Wa3laWW3e
-W5ea B XH W3BH NaI W-BH -N 5ea N55eaBNBI IU HN
B 55aW a ea 5a 1HB B 2HWHXe- U-5 IUV B-NBa HX
UN pU -2WONWBH NI UN e- U-5-Ba-W-NI 1HaNSU2 H5-25 HX
UN pU -2WHXNH 2V5aI Wa3laW H 2 a 2B-2UaI Ue Xa
UN pU -2WUa2 SH a -Xa35aI I a SH5ea IUV BaI N-5 Ba HX
WBH NI UN e- U-5 a3- W 1HI 25UNWHXNH 2V5aI VNW5pa
Wa3laW-Ba N55 1U-22 -WUW2-5aI -W2V5aI Wa3laW2HWHX
UN pU -2WONH5a 1a35aI SH W NSU2 -Xa35Ba/ UN-2
1HI 25UNW eaBaXBa 5ea 5a 1HB B 2HWHXe- U-5-NI UN Ua35
aXa35WHX3HNSB 35UNHN-I -3aN5e- U-5Ba 1BaWNSW-N-IpaBa
52aW5e-NWUNX3-N5U 1-35H5a/ UN-21HI 25UNWHX5eaW
Wa3laW eaW U 1-35W-Ba a 1a35aI SH a 2aW5e-NWUNX3-N5
1BHBSH U-5UN-N X5eaBBI 3aI X2H UN U-5UN

a HN2 WIN ea BHa35 WU 1-35HNe- U-51HaNSU2 HB3 1IaI
NHN 2V5aI VNW5pa U 2Xa Wa3laW U2 a 2aW5e-NWUNX3-N5

BHa35 1aB 5UN-N -UN5aN-NBa

- 4apaN - W - -N RaWpHUB, Ba-

T 4a-WN-2 -5aB3HNWp-5UNV5B/a 3H 2 -2aB5ea a3H2H
HX5ea 4apaN - W - -N RaWpHUB, Ba-

- HaNSU2T 1-35 ea BHa353H 2 -2aB5ea a3H2H HX5ea 4apaN
- W - -N RaWpHUB, Ba- ea 1HaNSU2U 1-35WHX5ea
BHa35HN5ea a3H2H HX5ea 4apaN - W - -N RaWpHUB, Ba-
-Ba IUV W5I UN5ea B XSTR -51-/a -N UN5ea MN-2STR
-51-/a -N HN1-/aW SH

T 1-35 BHBSH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHaNSU2
U 1-35 a3- W 5ea U 1-35W5aW25UN UN2HWHX U2H U-2BaWI BaW
UN5ea -Ba- aBa -II BaW5I -W-5HX5ea 4apaN - W - XHI
3HNSB21Ba35-NI BHa35HlaB 5UNW H 2 N55BaW25UN-N
-II 5UN-2U 1-35W 1V5a- HX5ea I-

I MN UN W T 1-35WHX BHa35 1aB 5UNW H 2 UN2 Ia -NN -2
X2UN HX5ea BaWpHUB 1 SH Xa5UNa2ap-5UN , 2eH / e 5eUW
1BaBaW H 2 -2aB5ea a3H2H HX5ea -Ba- HXUN NI -5UN 5eUW
U 1-35 -W-1I BaW5I -W-5HX5ea 4apaN - W - XHI 3HNSB2
1Ba35 ea 4apaN - W - XHI 3HNSB21Ba35-NI U-5UN
XB5eUMBa35 4, S -WW aI 1aBaNS2HWHX U2H U-2

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

BaW BaW2B-5aI UeUN5ea BaWpHUB-Ba- 1 SHa2ap-5UN
Xa5 -N 1BpUaI U-5UNXB5eUW2HW, W BaW25 Ba35
HlaB5UNW H 2 N5BaW25UN-N -II UUN-2U 1-35W 1V5a- HX
5ea I- ea Ba35 H 2 W a35- W-221H5UNHX5ea 11aB
4, R U aIU5a2 1V5a- HX4apaN - W - 5H1aBH U
UN N-5UN , IpaBaXa35W WBU5aI UeUNBa-WI - -53
e- U-5-N I B5UNHXUN N-5UN W3e -WaV 2UW aN5HX
UN5H 3aI XW Wa3IaW-Ba N5a 1a35aI I a5H5ea BpI5 HX
UN N-5UN-W a22-WHlaB5UN 1B5aI BaW5e-5 -UN-UN-IB
W/ aN5HXBaB a5 aaN5ea BaWpHUB-N 11aB a55aI Ba-3eaW

a HN2 UN ea Ba35 WU 1-35HN5ea a3H2 HX5ea 4apaN
- W - -N RaWpHUB, Ba- U2 a 2W5e-NWUNX3-N5

4-N5 , N RpaB

T RaI 35UNUNXa aN3 -N a 5a5HX2HI XH W3H 2
-IpaBa2 U 1-35R, M4 BaI 3UN 5ea Xa aN3 -N a 5a5HXe- U-5BaNa -21B5aWwUN5eUN-5 B23H N5 5 1a

- H5aNU2T 1-35 ea Ba353H 2 -IpaBa2 U 1-35R, M4
BaI 3UN 5ea Xa aN3 -N a 5a5HXe- U-5BaNa -21B5aWwUN5eUN-5 B23H N5 5 1a
ea 1H5aNU2U 1-35W5HX5ea Ba35HN5ea Xa aN3 -N a 5a5HX
e- U-5BaNa -2-Ba IUW WaI UN5ea BXS'IR -51-/aW
5eH /e -N UN5ea MN2S'IR -51-/aW SH SH
SH -N

T 1-35 BHBSH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBaI XB5eUMH5aNU2
U 1-35 a3- W- W-223e-N a UNX2HI UN Xa aN3 H 2 N5
e-pa - N53a- 2a H5a3H2H U-22 a-NUX2aXa35HN5ea
pa/a5-5UN-N e- U-5UN5eUWw/ aN5-N aXa35W H 2 a 2aW
5e-NWUNX3-N5

I MN UN W ea BaI 35UNUNXa aN3 -N a 5a5HX2HI XH W
3H 2 -IpaBa2 U 1-35R, M4 BaI 3UN 5ea Xa aN3 -N
a 5a5HXe- U-5BaNa -21B5aWwUN5eUN-5 B23H N5 5 1a
a5 aaN 52a g aUB-N 5ea U2 Ba 3HN2 aN3a Ba35
IpaBWNW 1 SH 3XW H 2 Ia3Ba-W 5ea 1H5aNU2XB5eU
XH WSH2HI a2ap-5aI 5aB3aW UeUN5ea 3e-NNa2I BN
- U Ba2a-WWBH 4apaN - W - 3XW eUW
1H5aNU2XB- BaI 35UNUN5ea Xa aN3 HXN5 B21e W3-2
IUW B-N5a -N 3H N5 BaWB 35 BN -3H5W5eaW 5aB3aW
3H 2 BaW25UN5ea apaN5 -2W33aWUNHXa-B -N 1HWU2
UN5aB aIU5a R, M4 SH -5 Ba R, M4 ea Xa aN3 HX2HI
WH BN apaN5WN5eaW 5aB3aW a5 aaN 52a g aUB-N 5ea U2

MN UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

Ba 3HN2 aNBa H 2 a BaI 3aI XH -N-paB/a HXHNBa apaB
 a-BWHNBa apaB a-BW g Ue Ba/-B SHR, M4 -W
 N5 B23H N5 5 la 5ea 2Ja2 3HNW aNBa HX5eUW3e-N a
 H 2 a - /BI -2 -5 B SUNHX5ea pa/a5 SUN-N W33aWUN
 SH -B -N-22 pU23e-1-BB2 Ue WI a Wa3UaWUW11a-BN XH
 5ea U -N H5eaBW11a-BN eaW3e-N aW H 2 HB3 BHN-
 SU a W-2a HXI a3-1aWH3aN5 BaW TN4a/ aN5 1Ha35aI 3e-N a
 UNXH Xa aNB XH - Ba5 BNUN5aP-2HX a-WH- Ba5 BN
 UN5aP-2HX a-BW H 2 a a 1a35aI SHBaW25UN- /BI -2 5
 a-WB 2a 3e-N a -5 B SUN UNpa/a5 SUNHN5aB3aW-N
 -N W UeUN5ea 3e-NNa2 MH 5ea W-N 1HUN5HX5ea R, M4
 N5 B23H N5 5eaW3e-N aW Ba NH5Na3aWB2 -IpaBW
 -5 Ba R, M4 5aN WH a W-Ba Ba2 5pa SH5ea H5eaB
 Ba1BaW5-SUNWXR, M4 a/ U -5 Ba UN5aB aI U5a -5 Ba
 R, M4 a3- W U5 1U-22 UWX5eaBXH 5ea -35pa BpaB
 3e-NNa2 5aN WH a UN-Ba-W H Ba a-W2 Iapa2HlaI 5e-NH5eaB-/aW
 HXR, M4 -N e-W aaNBaI 3aI UNa 5aN5apaN H Ba 5e-N5ea
 H N aB5 1aW eaBXH Ue Ba/-B SH5ea R, M4 N5 B2
 3H N5 -Ia3Ba-W UNXH Xa aNB 3H 2 BaW25UN5ea
 3Ba-SUNHX H Ba -5 Ba R, M4 e-N a SH- H Ba -5 Ba
 R, M4 UW 2aW5e-NWUNX3-N5U 1-35-N NH U5U-SUNUW
 Ba UaI W1H N5Ba- XH 5ea 3HN2 aNBa Ue U2 Ba
 4a/ aN5 H5a35 Ba2 5aI 3XW paBUNW H 2 BaI 3a
 5ea -Ba- Xa35aI HpaB-N XHI UN N-SUN - H 5 1aBaN5
 UN- a-BXHI -N 2aW5e-N 1aBaN5UN- a-BXHI TN
 aXa35 H5a35 Ba2 5aI IpaBUNW H 2 UNBa-W 5ea SU a a5 aaN
 XHI /aNab 5aI UN N-SUNapaN5WUN5eaW -Ba-W ea Xa aNB HX
 HpaB-N XHI UN apaN5W H 2 a BaI 3aI XH -N-paB/a HX
 HNBa apaB a-BWHNBa apaB a-BW, /-UN - W -223e-N a
 UNXH UN Xa aNB H 2 N5e-pa - NH3a- 2a H5a3H2H U-22
 a-NUN X2aXa35HN5ea pa/a5 SUN-N e- U5 UN5eUW/ aN5-N
 aXa35W H 2 a 2aW5e-NWUNX3-N5-N NH U5U-SUNUW Ba UaI

a HN2 WUN ea H5a35 WU 1-35HN5ea a3H2H HX5ea 4apaN
 - W - -N RaWpHUB, Ba- U2 a 2aW5e-NWUNX3-N5

T - RaI 3SUNUNXa aNB -N a 5aN5HXXH XH W3H 2
 -IpaBW2 U 1-35WaN aBeHNaI WUNaXH aB BaI 3UN 5ea Xa aNB
 -N a 5aN5HXe- U5 BaNa -21BBaWwUNR, M4 e- U5 5

- H5aNU2T 1-35 ea H5a35H 2 -IpaBW2 U 1-355ea WaN aB
 eHNaI WUNaXH aB BaI 3UN 5ea Xa aNB -N a 5aN5HXe- U5 5
 BaNa -21BBaWwUNR, M4 e- U5 5 ea 1H5aNU2U 1-35WHX5ea
 H5a35HN5ea Xa aNB -N a 5aN5HXe- U5 5BaNa -2-Ba
 IUN WAI Wa3UX3-22 UN5ea MN-2STR -51-/a -N /aNab 22
 HN1-/aW 5eHI /e

MN UN WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-SUNW
 -Be

Tg S4 SR S T T -/a

T 1-35 BUBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WB H UJ-5UNUBA UBI XB5eUMH5aNU2
U 1-35 a3- W 5ea V5aNaBeHBaI WUNaXH aBUWN5 NH N5H
HB3 B a5 aaN 55a g aUB-N 5ea U2 Ba 3HN2 aNBa -N
eaBa U - HB3 B-N XHHUW Xa aNB U 1-35WH5ea BHa35
H 2 a 2aW5e-NWUNX3-N5

I MNUW a5 aaN 55a g aUB-N 5ea U2 Ba 3HN2 aNBa
4, R 4a/ aN5 5ea V5aNaBeHBaI WUNaXH aBUWN5 NH N5H
HB3 B SpaNUX- WaI W Ba XB5aNaBeHBaI WUNaXH aB aBa
1BaV5UN4a/ aN5 U 1-35WH - -5 B 5UNHX, M4
e- U5I a 5H- BaI 35UNUXa aNB -N a 5a5HXHH XH W
H 2 N5-X55ea V5aNaBeHBaI WUNaXH aB a3- W WUWUN
5eUW/ aN5-Ba/aNaB22 NWU- 2a H N5Ba- XH 5ea
3HN2 aNBa Ue U2 Ba 4a/ aN5 V5aNaBeHBaI
WUNaXH aBUW NH NeUWHB3-22 SHB3 B ea BHa35 H 2
BaI 3a 5ea Xa aNB HXHaB-N XHHUW apaN5WH -N-paB/a
HXHNa apaB a-BWHHNa apaB a-BW ea V5aNaBeHBaI
WUNaXH aBUWH N UN5aB aIU5a 5H -5 Ba 1e-W R, M4
eUe UW-WBU5aI Ue UNBa aN5XHHUW apaN5WUa apaB
5H a-BW eaBaXBa 5eUWW -23e-N a UNXHHUW Xa aNB
H 2 N5e-pa - N53a- 2a HBa3HH U-22 a-NUW X2aX55HN
5ea V5aNaBeHBaI WUNaXH aBHB5eaBpa/ a5 5UN-N e- U5UN
5eUW/ aN5

a HN2 WUN T 1-35WH 5ea BHa35HN5ea V5aNaBeHBaI
WUNaXH aB H 2 a 2aW5e-NWUNX3-N5

T RaI 35UNUXa aNB -N a 5a5HXHaB-N XHHUW
3H 2 -IpaB2 -X55 , e- U5

- H5aNU2T 1-35 ea BHa35H 2 -IpaB2 U 1-35 -2X5NU
/N5-5eaBe- U5 ea 1H5aNU2U 1-35WH5ea BHa35HN5ea
Xa aNB -N a 5a5HXe- U5BaNa -2-Ba IUW WBI Wa3U3-22
UN5ea MN-2STR -51-/aW -N

T 1-35 BUBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WB H UJ-5UNUBA UBI XB5eUMH5aNU2
U 1-35 a3- W , UWN5 NH N5H BaI UN5ea BHa35-Ba-

I MNI UN W ea - ~~XXBNJ~~ / N 5- 5eaBUWNH5 NH N5H BaI UN5ea
BHa35-~~Ba~~- -N 5eaBa e-pa aaNH2 - e-N X2HXWUe5UN WUN5ea
BHa35-~~Ba~~- ea , UW WBU5aI Ue UN5aB aI U5a SH -5 Ba
R, M4 e- U55W a3- W UN5aB aI U5a SH -5 Ba R, M4 e- U55W
H 2 -5 Ba VH 2 UN5ea - WNa HX~~XHI~~ I U5 B-NBa - 2HN aB
~~XHI~~ Ba5 BU~~Na~~B-2UN4a/ aN5 U2NH5U 1-355ea e- U55W
WU- U5 XB , H N~~Na~~- XH 5ea 3HN2 aNBa Ue U2
Ba 4a/ aN5 5ea BHa35 H 2 BaI 3a 5ea Xa aNB HX
HpaB-N ~~XHI~~ UN apaN5W~~XH~~ -N-paB/a HXHNBa apaB a-BW
SHHNBa apaB a-BW a3- W , UW WBU5aI Ue
UN5aB aI U5a SH -5 Ba R, M4 5eUWW -223e-N a UN~~XHI~~ UN
Xa aNB H 2 N5e-pa - N53a- 2a HBa3H~~H~~ U-22 a-NUX 2
aXa35HN5ea ,

a HN2 WUN T 1-35W~~XH~~ 5ea BHa35HN - ~~XXBNJ~~ / N 5- 5eaB
e- U55 U2 a 2W5e-NWUNX3-N5

T RaI 35UNUN~~Xa~~ aNB -N a 5aN5HXHpaB-N ~~XHI~~ UN
3H 2 -IpaB~~W2~~ -~~Xa~~354 R-N 4-N5 , N R~~pa~~B H~~2~~ W~~B~~e- U55
IH N~~Na~~- HX5ea 3HN2 aNBa Ue U2 Ba

- HaN5U2T 1-35 ea BHa353H 2 -IpaB~~W2~~ -~~Xa~~354 R-N
5ea 4-N5 , N R~~pa~~B H~~2~~ W~~B~~e- U55 ea 1HaN5U2U 1-35W~~XH~~
5ea BHa35HN5ea 4 R-N 4, R H~~2~~ W~~B~~e- U55IH N~~Na~~-
HX5ea 3HN2 aNBa Ue U2 Ba -Ba I U5 W~~U~~ UN5ea B XSTR -5
1-/aW -N -N UN5ea MN-2STR -51-/a

T 1-35 BUBSH U5U-5UN aW5e-NWUNX3-N5

3 U5U-5UN a-WBa H U5U-5UNUBa UBaI XB5eUMHFaNU2
U 1-35 a3- W 5ea U 1-35aI -Ba UN5Ba 1a35aI SH a -IpaB~~W2~~
-~~Xa~~35aI I a SH5ea 23 HXN~~B~~3a- 2a 3e-N a UNe- U553HN U5UNW

I MNI UN W V5IH N~~Na~~- XH 5ea 3HN2 aNBa Ue U2 Ba
4a/ aN5 BHa35 Ba2 5aI 3X~~M~~ paB~~W~~NW H 2 BaI 3a 5ea
-Ba -~~Xa~~35aI HpaB-N ~~XHI~~ UN N-5UNUN -N a-B
~~XHI~~ W - H 5 1aBaN5-N 2aW5e-N 1aBaN5 BaWa35pa2 TN
a~~Xa~~35 BHa35 Ba2 5aI I paB~~W~~NW H 2 UNBa-W 5ea 5U a a5 aaN
~~XHI~~ /aN5aI UN N-5UNapaN5WUN5eaW -Ba-W ea Xa aNB HX
HpaB-N ~~XHI~~ UN apaN5W H 2 a BaI 3aI XH -N-paB/a HX
HNBa apaB a-BW~~SH~~HNBa apaB a-BW , 3e-N a UN5ea
Ba3 BaNBa UN~~Na~~B-2HX a-BWB HBa UW~~N~~3U-5aI 5He-pa -N
-IpaB~~W~~ a~~Xa~~35HN4, R H~~2~~ W~~B~~-N 4 R e- U55 , W-22
3e-N a UN~~XHI~~ UN Xa aNB H 2 N5e-pa - N53a- 2a HB
a3H~~H~~ U-22 a-NUX 2a~~Xa~~35HN5ea pa/a5 5UN-N e- U55UN5eUW
W/ aN5-N BHa35U 1-35WN4 R-N 4-N5 , N R~~pa~~B
H~~2~~ W~~B~~-BIH N~~Na~~- HX5ea U2 Ba 3HN2 aNBa H 2 a

MNI UN WESTR XB4-N5 , N R~~pa~~Bg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

2aW5e-NWUNX3-N5 , 2eH / e 5ea U 1-35aI -Ba UWUa2 SH a
HB3 1aI Hfe Wa3laW5ea -Ba N5a 1a35aI SH a -IpaBw2
-Xa35aI I a SH5ea 2-3 HXNHB3a- 2a 3e-N a UNe- U-53HN UNNW

a HN2 WUN T 1-35WH 5ea BH35HN4 R-N 4-N5 , N
RupaB H22 WBe- U-5 IH N5a- HX5ea 3HN2 aNBa Ue U2
Ba U2 a 2aW5e-NWUNX3-N5

T RaI 3UNUNXa aNB -N a 5aN5HXHpaB-N XHH UN
3H 2 -IpaBw2 -Xa354 R-N 4-N5 , N RupaB H22 WBe- U-5
a5 aaN 52a g aUB-N U2 Ba

- HaN5U2T 1-35 ea BH353H 2 -IpaBw2 -Xa354 R-N
5ea 4-N5 , N RupaB H22 WBe- U-5 ea 1HaN5U2U 1-35WH
5ea BH35HN4 R-N 4, R H22 WBe- U-5 a5 aaN 52a
g aUB-N U2 Ba -Ba IUW WAI UN5ea BXSTR -51-/aW
-N -N UN5ea MN2STR -51-/aW -N
SH

T 1-35 BHBSH U-5UN HaN5U2 WUNX3-N5

3 U-5UN a-WBa ea BH35 U2UNBHB5a U-5UN
a-WBaW T -N T UN4a3UN HX5ea
BXSTR -N UN4a3UN HX5ea MN2STR e3e U2aNWBa
5e-5 Nug aVaN U2 HN5HB-N Ba Hpa Up-Wpa Wa3laW
aW 2WUN UN5ea 3e-Na2-N -I -3aN5R, M44 e- U-5W a5 aaN
4apaN - W - -N U2 Ba NaB T
Nug aVaN U2 HN5HB-N Ba Hpa Up-Wpa NNN-5pa
Wa3laWaW 2WUN UN5ea 3e-Na2-N -I -3aN5R, M44 e- U-5W
a5 aaN4apaN - W - -N U2 Ba -Ba5Wa3laWNB2 Ia
Wa3laWHX5 -BW HBW23aI -B Tamarix W1 XI N5 UN/ B W
Pennisetum setaceum -N / UN5BaI Arundo donax eaW
Wa3laWaW 2W UNe- U-5WWU 2a XB4 R-N 4-N5 , N
RupaB H22 WBe-N e-pa 5ea 1HaN5U2SHWB-I X5eaBUNH
-I -3aN5WU 2a e- U-5-Ba-WIN5U23HN5H2 U2 a aW 2W aI
WV - 3H UN5UNHX1e W3-2Ba Hp-2-N eaB U-25Ba-5 aN5
WV -11BHIB5a aNpUBN aN5-2Wx/ -B W aB UaW U2 a
WAI 1 BW-N5SH -N X35 BaBWUN5B 3UNW-N W-N-B
a-WBaW U2 a 5 aN5H-pHU U 1-35WH -5aB -25 HSH
WpaB2X2H 1 5Ba-5 aN5W H 2 a-N5U-5aI I BN 5ea XB5
a-B Ue X2H 1 HN5HB-N 5Ba-5 aN5W-52a-WHNa
-NN -22 UNaNWUN a-BW , IIUN-22 NaB T
Nug aVaN U2Iapa2Hl - 1HY B UN3HNB UN5UN Ue
4 -/aN3 1-B3U-N5W5HW2a35pa2 BaV5Ba 4 R-N
4-N5 , N RupaB H22 WBe- U-5 WV e- U-5 -NI 2-5UN
a5eaB a3e-N3-2 a-NWBeUe 1BaWBa -5aB SHa Hpa
pa/ a5-5UN-N 2a-pa XaW2 Ia1HMaI WN -N W5 WU 2-5UN 5ea
MN UN WESTR XB4-N5 , N RupaBg -5aBRUe5, 1123-5UNW
-Be
Tg S4 SR S T T -/a

e- U-5 BaNa UN -XaB -5e HXN-5 B2XHH UN eUW U2 a IHNa
WV -N-I-15pa -N/a aN5 -11BH3e Ue UNi 5XH 4
W aeHzaBWTXea eUe 1BWWa -5aB a5eHI UW WI -5aB U2
a 1UaI Nug aVaBN5H-B-WHXWU5 2a e- U-5, eUe
1BWWa NH 2a U2 a 1Ua35aI -52B-2UaI -B-WHXe- U-5
Ia5aB UaI 5H a WU5 2a XB4 R-N 4-N5, N RUpaB H22
W-B-XaBBNa -2 ea NH 2a U2 a e-N HlaB5aI HBHlaB5aI
XH -2/e5paeU2a B-5 aN5W U2 a-33H 12Wai UN-
BNH UaI 2B IaWUNSH-2H a laBU aN5-25aWUN HXp-BJ 2aW
W3e -W B5UN-N UN5aNW5 HXWB -115UNHX3a-NWN
W-WNHXI U5 B-NBa -1123-5UNHXWai pW-2H UN N-5 B2
I UWaB2 a3, BUHBH W HNSHBV 1BY B XN aI

Nug aVaBN U2 a aW 2Wai 5HaN 2a 5a IUx6BaNaW HN
a laBU aN5-25a-5 aN5WH a Ia5aB UaI ea 1BU -B UNi U-5-HBX
W33aW U2 a B2-5aI 5HIapa2HI aN5HXe- U-53e-B35aBY3W
UaN5UaI Ue 1UHaBaSHUN5aB aI U5a R, M4 e- U-5 UeUN
eUe 4 R-N 4-N5, N RUpaB H22 W-B1HI 2-5UNW5-pa
aaNIHB aNaI eaW 3e-B35aBY3W-Ba IHB aNaI UN5ea
25aB5 B-N U2 a Wa3UaI -W-BHX5ea Nug aVaBN
1BY B ea 1BY B U2 a -I VaI -11BHlBU5a2 -WaW2W
XH a-BaBaXHBW a3H a-p-U 2a ea IaWUN-N
U 12a aN5-5UNHX5ea HV HON aXHB U2 a XN aI

Nug aVaBN-N 3HN 35aI B1BaN5-5paWFX Nug aVaBN
Ue UNi 5XH 5ea 4Mg 4-N M, 3H 12a5a IaWBI5UN
HX5eW a5eHI UW-2WUN2 IaI UN, 11aNU S HX5ea B XSTR
4a35UN Nug aVaBN3H U5H-3eUpUN - U-5UN
1aBXB -Nba W-N-B HXBaVHBV -3BaWXUN5aB aI U5a 5H2-5a
W/a R, M4 e- U-55H5ea a-B2 HBUN5aB aI U5a W/a R, M4
e- U-5I BV 5ea XB5 aN5 a-BMX BHa35U 12a aN5-5UN

I MNU UN W T 12a aN5UN T -N T U2HXW5
-N53U-5aI BaI 35UNUNXHH Xa aN5 -N B2-5aI e- U-5
BaNa -2 Ue -N/a aN5-35pUaW5e-5BaNa e- U-5-N B Hpa
Up-Wpa 12-N5 Wa3UaW5e-5-Ba aNBH-3eUN HN5ea e- U-5HB3 1aI
4 R-N 4, R H22 W-BBaI 3UN 5ea U 1-35SH a2H 5ea
5eBaWHI HXWUNX3-NBa, N Ba -UNU U 1-35W U2 a 2aW5e-N
WUNX3-N5

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNe- U-5 U2 a
2aW5e-NWUNX3-N5

T e-N a UNNHVHB I- XH W3- WI 5ea BHa353H 2
-Xa35- -53 e- U-5W-N Wa3UaWH N5Ba- HX5ea 1HUN5HXI UpaWUN

- HaNU2T 1-35 ea BHa353H 2 -Xa35- -53 e- U-5W-N
Wa3UaWH N5Ba- HX5ea 1HUN5HXI UpaWUN ea 1HaNU2
U 1-35WX5ea BHa35HN- -53 e- U-5W-N Wa3UaWH N5Ba-
MN UN WESTR XB4-N5, N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

HX5ea 1H05HXI p̄aB̄W̄N- B̄ I ŪW̄ W̄I ŪN5ea B̄ X̄S̄TR -51-/aW
-N -N ŪN5ea M̄N-2S̄TR -51-/aW 5H

T 1-35 B̄H̄B̄SH ŪU-5ŪN aW̄5e-NW̄N̄X̄3-N5

3 ŪU-5ŪN a-W̄B̄ H ŪU-5ŪN ŪW̄B̄ ŪB̄I X̄B̄5eŪM̄H̄āN̄S̄Ū2
U 1-35 a3- W̄B̄I 3S̄ŪN̄W̄ŌN̄X̄H -B̄ ŪN̄B̄-N aX̄X̄35W̄H̄N- -53
W̄I B̄aW̄B̄a 2aW̄5e-NW̄N̄X̄3-N5

I M̄N̄ŪV̄W̄g ŪeŪN4a/ aN5 12 N̄ a 1H̄H̄25H 55a g Ūd̄B
B̄I 3S̄ŪN̄W̄ŌN̄-paB̄/a N̄H̄N̄V̄H̄B I- X̄H W H 2̄ H̄B3 B5eB̄H /eH 5
5ea a-B eaN -5aB̄ŪW̄ p̄aB̄aI X̄H 5ea 12 N̄ a 1H̄H̄2 N̄ aB e-W̄
T̄T̄H̄X̄5ea 2 N̄ a H̄H̄ Ūa2ŪN̄a , -53 e- Ū5ŪM̄B̄aW̄N5 ŪeŪN
5eŪW̄W̄/ aN5 5ŪW̄U ŪaI 5H5ea -5aB3H̄2 N ŪeŪN5ea -ŪN
3e-N̄N̄a2 g Ūe 5ea B̄H̄a35 X̄H W ŪeŪN5eŪW̄W̄/ aN5 H 2̄ a
B̄I 3aI 5H5ea 3X̄W a-B̄H̄I N̄ B̄a2a-W̄I 5H5ea 2 N̄ a H̄H̄2H̄B
2 N̄ a H̄H̄2 -W̄W̄ Ūa2ŪN̄a , 2eH /e B̄I 3S̄ŪN̄W̄ H 2̄ H̄B3 B
a ŪW̄ŪV̄ H̄IaB̄5ŪN̄W̄ H 2̄ 2Ūa2 a W̄X̄X̄3ŪN̄5H̄W̄11H̄B55ea - -53
3H N5 5e-53 B̄āN̄S̄2 a ŪW̄W̄ŌN̄5eŪW̄W̄/ aN5 T̄N-11ŪS̄ŪN̄ N̄H
W̄N̄W̄Ūp̄a - -53 Wa3Ūd̄W̄B̄a 1a35aI 5H̄B3 B̄eaB̄
H̄N̄W̄ aN52 5ea B̄I 3S̄ŪN̄W̄ŌN̄X̄H ŪeŪN5eŪW̄W̄/ aN5 H 2̄
B̄aW̄2ŪN̄2aW̄5e-NW̄N̄X̄3-N5U 1-35W̄H̄N- -53 e- Ū5W̄-N̄
-W̄B̄Ū5aI Wa3Ūd̄W̄g ŪeŪN4a/ aN5 -N̄ X̄H 55a g aŪB̄SH
S 45B̄a5 B̄I 3S̄ŪN̄W̄B̄a N̄a/ 2ŪŪ2a 5eB̄H /eH 55ea a-B̄I a 5H5ea
23 H̄X̄X̄H W̄N̄aB̄ H B̄H̄a353H̄N̄ŪS̄ŪN̄W̄ H̄N̄W̄ aN52 N̄H
U 1-355H- -53 B̄aW̄I B̄aW̄ŪW̄a 1a35aI 4a/ aN5S e-W̄Ō3B̄a-W̄I
X̄H B̄a25p̄a 5H 1V̄B̄a- W̄/ aN5W̄ a 5H5ea ŪN̄X̄H X̄H
5B̄U 5-B̄aW̄ , W̄ B̄aW̄25 B̄H̄a35aX̄X̄35W̄B̄a X̄B̄eaB̄B̄I 3aI -N̄ 5ea
B̄H̄a35 H 2̄ e-pa - 2aW̄5e-NW̄N̄X̄3-N5U 1-35H̄N- -53
Wa3Ūd̄W̄-N̄ e- Ū5W̄ ŪeŪN5eŪW̄W̄/ aN5 T̄N4a/ aN5M̄ 5ea
1B̄H̄I H̄B̄ŪN̄H̄X̄X̄H -5B̄U 5- 2a 5H̄B̄a2a-W̄W̄X̄H 4apaN - -
-N̄ X̄H X̄H W̄55ea B̄H̄a35I p̄aB̄W̄N̄1H̄ŪN5ŪW̄a 5B̄a a2 W̄-22
H̄N̄W̄ aN52 3e-N̄ aW̄B̄aW̄2ŪN̄ X̄H B̄H̄a35I p̄aB̄W̄N̄W̄ŌN̄5eŪW̄
W̄/ aN5-B̄a ŪN̄B̄-N̄ 2aW̄5e-NW̄N̄X̄3-N5 4a/ aN5 X̄H
R̄p̄aB̄W̄a -B̄H̄ W̄SH B̄I H̄ - ŪN̄B2 I aW̄N̄a 5aN̄W̄p̄a - -53
aN̄p̄ŪB̄N̄ aN52-B̄a2 I a 5H5ea 1B̄aW̄N̄Ba H̄X̄ B̄I H̄M̄H̄H̄I H̄N̄B̄H̄2
-W̄N̄ H̄5e 5ea -W̄N̄-N̄ 5ea 4, R W̄11H̄B52B̄a 1H̄I 2-5ŪN̄W̄H̄X̄
- -53 Wa3Ūd̄W̄ ŪeŪN- p-B̄d̄5 H̄X̄- -53 e- Ū55 1aW̄ ea
aX̄X̄35W̄H̄X̄5ea B̄H̄a35 ŪeŪN5eŪW̄W̄/ aN5 H 2̄ a aW̄āN̄S̄Ū22
N̄a5a35- 2a I a 5H5ea ŪU -2B̄I 3S̄ŪN̄B̄a25p̄a 5H5ea 5H̄5-2X̄H
T 1-35W̄H̄- -53 W̄I B̄aW̄ ŪeŪN5eŪW̄W̄/ aN5-B̄a 1a35aI 5H a
2aW̄5e-NW̄N̄X̄3-N5

a H̄N̄B2 W̄H̄N ea B̄H̄a35 W̄U 1-35H̄N- -53 e- Ū5W̄-N̄ Wa3Ūd̄W̄
I H̄ N̄V̄B̄a- H̄X̄5ea 1H̄ŪN5H̄X̄I p̄aB̄W̄N̄ Ū2 a 2aW̄5e-NW̄N̄X̄3-N5

T e-N̄ aW̄ŌN̄V̄H̄B̄ X̄H W̄3- W̄I 5ea B̄H̄a353H̄ 2̄ -X̄X̄35
M̄N̄ŪV̄W̄E S̄TR X̄B̄4-N5 , N̄ R̄p̄aB̄g -5aB̄R̄Ūe5, 1123-5ŪN̄W̄
-B̄e
Tg S4 SR S T T -/a

5ea 4-N5 , N W3 aBI H N5A- HX5ea 1H05HXI aBWHN

- HANU2T 1-35 ea BHa353H 2 -Xa355ea 4-N5 , N W3 aB
IH N5A- HX5ea 1H05HXI aBWHN ea 1HANU2U 1-35WHX5ea
BHa35HN5ea 4-N5 , N W3 aBI a 5H3e-N aWONVHB XH W
3- WI 5ea BHa35- B IUV WI UN5ea BXSSTR -51-/a
-N UN5ea MN2STR -51-/aW SH

T 1-35 BHBH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WB H U-5UNUBa UB I XB5eUMHANU2
U 1-35 a3- W 5ea BHa35WU 1-35WHN5ea 4-N5 , N W3 aB
H 2 a 2aW5e-NWUNX3-N5

I MNUVW e-N aWON1a- VHB XH W- B N5a 1a35aI SH
-IpaB2 -Xa355ea 4-N5 , N W3 aB-2eH / e 5eaUW WUe5
1HANU25e-52H aBpa2BUaWONVHB 1a- W3H 2 Ia/ B Ia e- U-5
B HpUV 2aWONa WI U aN5XH BpaB aI / Bpa2WHANU2
WI XBW- NON 4 3e U 1-35W- B 2aWUa2 UN5ea IH N5A-
e- U-5W eaB 5ea Wa3laWOWI N I a 5H5ea W -22 BHa35 B2-5aI
aXa35HN55-2XH T 1-35WH- -53 B aWI BaW UeUN5eUW
W/ aN5 U2 a 2aW5e-NWUNX3-N5

a HN2 WHN ea BHa35 WU 1-35HN5ea 4-N5 , N W3 aB
IH N5A- HX5ea 1H05HXI aBWHN U2 a 2aW5e-NWUNX3-N5

T e-N aWONNHN VHB I- XH W3- WI 5ea BHa35
3H 2 -Xa355ea 4-N5 , N W3 aBI H N5A- HX5ea 1H05HXI aBWHN

- HANU2T 1-35 ea BHa353H 2 -Xa355ea 4-N5 , N W3 aB
IH N5A- HX5ea 1H05HXI aBWHN ea 1HANU2U 1-35WHX5ea
BHa35HN5ea 4-N5 , N W3 aBI H N5A- HX5ea 1H05HX
I aBWHNI a 5H3e-N aWONNHN VHB I- XH W3- WI 5ea
BHa35- B IUV WI UN5ea BXSSTR -51-/aW -N
-N UN5ea MN2STR -51-/a

T 1-35 BHBH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WB H U-5UNUBa UB I XB5eUMHANU2
U 1-35 a3- W U 1-35WHX5ea BHa35HN5ea 4-N5 , N 4 3 aB
H 2 a 2aW5e-NWUNX3-N5

I MNUVW e-N aWONNHN VHB I- XH W3- WI 5ea BHa35
3H 2 -Xa355ea 4-N5 , N W3 aBI H N5A- HX5ea 1H05HX
I aBWHN eUWwa3laWOWI B aN5HB1HANU2 1BaW5 UeUN5ea
2H aW5eBa 4, R W/ aN5W-2 aI g UeUN4a/ aN5S - W -22
- H N5HXeU5HB3-22 WU 2a e- U-5HB3 BW Ue - WU 2a B3HB

MNUVW ESTR XB4-N5 , N RaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

HXH Wp-5UN ea 1HaNSU2SHW11H5eUWWa3laWON5eUW
W/ aN5e-W aaNW WNSU2 IU UNWaI I a SHa BH 5UN HX
-5aB5a-5 aN512N5aX2 aN5SH- Na 2B-5UNX5eaB
IH N5a- T5UWJa2 5e-5- 2-B a 1BH H5UNHX5ea N5N5HB
XH UN5ea eU5H3-2I-5 XH5eUWW/ aN5 -WaX2 aN5H 5XH
5e-5NH2HN aBa U5W HNW aN52 5ea 1HaNSU2SHW11H55ea
4-N5 , N- W3 aBUWW WNSU2 BaI 3aI - U-5 UeUN4a/ aN5
MUWWU5 2a XH5ea 4-N5 , N- W3 aBNa-B 5eBH /eH 5 TN
-II 5UN 1HI 2 5UNW5X5eUWWa3laWe-pa aaNIa5a35aI UNWpaB2
2B-5UNW UeUN5eUWW/ aN5 ea aXa35W5X5ea BH5a35 UeUN
5eUWW/ aN5 eH apaB-Ba a 5a a2 W-22 4U U2B 5ea U 1-35
-XaB5ea BH5a35 UeUN4a/ aN5 Ua 1a35aI 5H-e-pa apaN2aW5X
-NaXa35 , W BaW25 5ea BH5a35UN5Ba 1a35aI 5H-1paB2
-Xa355ea 4-N5 , N- W3 aB

a HN2 W5N ea BH5a35 WU 1-35HN5ea 4-N5 , N- W3 aB
IH N5a- HX5ea 1HUN5HXI paB5UN U2 a 2aW5e-NWUNX3-N5

T e-N aWONN5N5HB I- XH W3- W5I 5ea BH5a35
3H 2 -Xa35BJ-BUN-N a52-N e- U-5-N Wa3laWH N5a- HX5ea
1HUN5HXI paB5UN

- HaNSU2T 1-35 ea BH5a35H 2 -Xa35BJ-BUN-N a52-N
e- U-5-N Wa3laWH N5a- HX5ea 1HUN5HXI paB5UN ea
1HaNSU2U 1-35W5X5ea BH5a35HNBJ-BUN-N a52-N e- U-5-N
Wa3laWH N5a- HX5ea 1HUN5HXI paB5UNI a 5H3e-N aWON
N5N5HB I- XH W3- W5I 5ea BH5a35-Ba IU5 W5I UN5ea
B XSTR -51-/a -N UN5ea MN-2STR -51-/aW
5eBH /e

T 1-35 BH5SH U5-5UN aW5e-NWUNX3-N5

3 U5-5UN a-WBa H U5-5UNUBa UBaI XH5eUMH5aNSU2
U 1-35 a3- W BaI 35UNUNXH H 2 BaW25UN2aW5e-N
WUNX3-N5U 1-35W5NBJ-BUN-N a52-N e- U-5-N -W5BU5aI
Wa3laW

I MNUVW e-N aWONN5N5HB I- XH W3- W5I 5ea BH5a35
3H 2 -Xa35BJ-BUN-N a52-N e- U-5-N Wa3laWH N5a-
HX5ea 1HUN5HXI paB5UN g UeUN4a/ aN5 -N Ue 5ea
U 12a aN5 5UNHX e-W TITHX5ea 2 Na H2 Ua2Na 5eaBa
H 2 a W WNSU2BaI 35UNWUN-paB/a N5N5HB I- XH W
5eBH /eH 55ea a-B RU-BUN-N a52-N e- U-5 UN2 IU5
e- U-55e-5W11H5WBJ-BUNIa1aN aN5WN UB WW3e -W2a-W5
a2 WpUBaH W5 5e aW5aBN UZH X2 3-5eaB-N aW5aBN a2H
U2aI 3 3 HH UM BaW55eBH /eH 5 H5HX5eUWW/ aN5 g Ue
5ea e-W TIT 2 Na H2 Ua2Na UN12-3a BH5a35I paB5UNW

MNUVW STR XH4-N5 , N- RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

H 2 HB3 B-55ea 12 N a 1H2-N XH W UeUN5eUWw/ aN5
H 2 a BI 3aI 5H 3XWU5eaBaNaBN 5ea BpaB-55ea 2 N a
H2HB-55aB UN WX5ea 2 N a H2 1-WW H2 Ua2Na
, ZeH / e BI 35UNW H 2 HB3 Ba U5UN HlaB 5UNWNNHN
WB I- W H 2 2Ua2 a WXX3Ua5HW11H55ea W -2- H N5
HXBI-BJNe- U-55e-5a U5WUN5eUBa-3e -N - a-WB 2a
BI 35UNUNe- U-5UNH5a 1a35aI H HN12-N5-N U 2X
Wa3UaW-WBU5aI Ue 5ea BI-BJN-N a52-N e- U-5UN5eUW
W/ aN5-Ba 5eaBXBa NUa2 5H a-IpaBw2 -Xa35aI TN
-II UUN NHWNW5pa - -53 Wa3UaW-Ba 1a35aI 5HB3 BeBa
RaI 35UNWNNHNWB XH W UeUN5eUWw/ aN5 H 2 BaW25UN
2aW5e-NWNX3-N5U 1-35WNBj-BJN-N a52-N e- U-5-N
-WBU5aI Wa3UaW RaI 35UNUNWB XH W UeUN5eUWw/ aN5
-Ba N5a 1a35aI 5H-IpaBw2 -Xa35BI-BJNBaW BaW-N H 2
5eaBXBa a 2aW5e-NWNX3-N5-N - -U UN5eaUBa 1-NWNN
I a 5HBaI 3aI WH BN g UeH 5 e-W TITHX5ea 2 N a H2
Ua2Na BHa35I paBWNW H 2 5 a 12-3a-5 52a g aUB-N
XH WUN4a/ aN5 H 2 N5 a -Xa35aI g UeUN5ea W W aN5
IH N5Ba- W/ aN5WBI-BJN-N a52-N e- U-5/BI -22
5BNWUNWXH paB W-Ba 5H- W5 a5 aaN 52a g UB-N
U2 Ba 5Ha 5aNWpa W- Hpa BIHMHH HNB2 -WN
ea BHa35WaXa35HNXH WUW Ba-5aBUN5ea 1WB- 1H5UNW
-ZeH / e 5ea - H N5HXe- U-5UBa2-5pa2 W -22 eUWaXa35UW
XBeaBIU UNWai 3HNUN UN IH N5Ba- -WXH WXH HeaB
5BU 5-BaW-N WI BaW a3H a 1BaIH UN5-N BHa35Ba2-5aI
aXa35W a3H a UN UWaBU2a UN5ea XBeaWIH N5Ba- W/ aN5W
HNW aN52 5ea BHa35 H 2 e-pa - W -22aXa35HN5eHW -Ba-W
Ue - W -22- H N5HX a52-N -N BI-BJNe- U-5-N pUB -22
NHaxa35UN5eHW -Ba- W5e-5W11H5 W W-N5U2- H N5WHXBI-BJN
e- U-5-N pUB -22 NHaxa35UN5eHW -Ba- W5e-5W11H5
W W-N5U2- H N5WHXBI-BJNe- U-5-N -WBU5aI Wa3UaW
RaI 35UNUNXH UeUN5eaW 2H aBXpa W/ aN5W H 2 BaW25UN
2aW5e-NWNX3-N5U 1-35WNBj-BJN-N a52-N e- U-5-N
-WBU5aI Wa3UaW

a HN2 WNN ea BHa35WU 1-35HNBI-BJN-N a52-N e- U-5
-N Wa3UaWH N5Ba- HX5ea 1HUN5HXI paBWN U2 a 2aW5e-N
WUNX3-N5

T - e-N aWNNHNWB I- XH W3- WI 5ea BHa35
3H 2 -Xa35BI-BJN-N a52-N e- U-5-N 5ea WI 5e a5aBN UZH
X 3-5eaBI H N5Ba- HX5ea 1HUN5HXI paBWN

- HANU2T 1-35 ea BHa353H 2 U 1-35BI-BUN-N a52-N
 e- U5-5-N 5ea WI 5e aVABN UZH X 3-SeaBIH NMB- HX5ea
 1HUN5HXI IpaBWIN ea 1HANU2U 1-35WHN5ea WI 5e aVABN
 UZH X 3-SeaB-Ba IUY WI UN5ea MN-2STR Wa3UX-22 -5
 1-/aW -N

T 1-35 BUBSH UO-SUN aW5e-NWUNX3-N5

3 UO-SUN a-WBa H UO-SUNUBa UBI XIB5eUWU 1-35
 a3- W3e-N aWUNXH BaW25UN XH 5ea BHa35 U2NH5
 -IpaB2 U 1-355ea BI-BUNpa/a5-SUNUN5eUW-Ba- -N U2
 5eaB-XB NH5U 1-355ea WI 5e aVABN UZH X 3-SeaB

I MNUVW He- U5-5WU5 2a XIBWI 5e aVABN UZH X 3-SeaB
 NaVUN UMBaW5UN4a/ aN5 -22 55ea IH NMB- aN HX
 4a/ aN5 -N aWUNU2 -2HX4a/ aN5S TN4a/ aN5
 e- U5-5 WI 5ea WI 5e aVABN UZH X 3-SeaBUW11H5aI
 eUe / BI N -5aB2apa2W5e-5 H 2 NH5 a U 1-35aI BHa35
 IpaBWINW TN4a/ aN5WM-N -W a2-W BIH -WN eUe
 1BpUa NaVUN e- U5-5XIB5ea X 3-SeaB BHa35IpaBWINW H 2
 NH5W V-N5U2 -X35/ BI N -5aBHWB3a -5aBXH W5e-5
 W11H5BI-BUNpa/a5-SUN a3- W5eaBa -Ba UN5aPaNUN WI BaW
 HXWB3a -N / BI N -5aBUNXH a5 aaNH3 1UaI e- U5-5-N
 5ea 1HUN5HXI IpaBWIN eaB-XB BHa35IpaBWINW H 2 e-pa
 2aW5e-NWUNX3-N5U 1-35WHN5ea X 3-SeaB-N U5e- U5
 T 1-35WHN5ea WI 5e aVABN UZH X 3-SeaBUN4a/ aN5 -Ba
 IaWBUaI UNT 1-35 T

a HN2 WIN T 1-35WBH 5ea BHa35HNBI-BUN-N a52-N
 e- U5-5-N 5ea WI 5e aVABN UZH X 3-SeaBIH NMB- HX5ea
 1HUN5HXI IpaBWIN U2 a 2aW5e-NWUNX3-N5

D. Geology, Soils, and Mineral Resources

BHa35 HNSB 35UN

- 4apaN - W - -N RaWpHUB HNSB 35UN, Ba-

S T 12a aN5-SUNHXW-WN-23HNWp-SUNVSH/a H 2
 UNB2 Ia HIUG-SUNHX5ea SBW B3 HXUN5- a SB 35 Ba -N IB2UN UNH
 aIBB SH1BpUa -11UN-2-N5eHBWXB5ea VB 35 Ba eaW-35pUaW
 - BaW25UNWUNX3-N5U 1-35W-WBU5aI U5e WIU aN5-SUN-N
 aBWIN-55ea -W HX5ea I- 4 V-N5U2aBWIN - -2MH3 BI BN
 5eaW WH5 5aB 3HNSB 35UN-35pUaW5eBI / e 5ea W HX aB VSHI IpaB
 -5aBXH

- HANU2T 1-35 ea BHa353H 2 BaW25UNWIU aN5-SUN-N

MNUV WESTR XB4-N5 , N R IpaBg -5aBRUe5, 1123-SUNW
 -Be

Tg S4 SR S T T -/a

aBMMN-55ea -W HX5ea 4apaN - W - ea 1HaNSU2U 1-35W
HX5ea BHa35HNWI U aN5-SUN-N aBMMN-55ea -W HX5ea I-
-Ba IUW WI UN5ea BXSSTR -51-/aW -N -N
-N UN5ea MN-2STR -51-/a

T 1-35 BBBSH UU-SUN HaNSU2 WNX3-N5

3 UU-SUN a-WBa ea BHa35 U2UNBHEHB5a UU-SUN
a-WBa S UN4a3SUN -N HX5ea BX
STR -N UN4a3SUN 1-/a HX5ea MN-2STR eUe U2
aNWBa 5e-5 aXBa a/UNON 3HNSB 3SUN - WI U aN5-SUN-N
aBMMN3HNSB212-N -N - 45HB g -5aB H2 SUN BapaNSUN 2-N
U2 a 1Ba1-Ba NUg aVaN-N W U5aI SH4, Rg
XB-11Bp-2 g eaBa 1HWU2a aBMMN3HNSB2 a-WBaW U2 a
U 12a aNaI NUg aVaN aXBa a/UNON HB UN5ea B UN
W-WN -N SH UNU Ua WHB5 5aB U 1-35W-WBU5aI Ue
aBMMN-N HXXW5a W5-SUNHX5ea 4, R 45-N-B aBMMN-N
WI U aN53HNSB2Xa-5 BaW U2 a WI I BN -N U aIU5a2
-5aB/BIUN -N a 3-p-SUN , 4g UW Ba UB aN5HX5ea
aNAB2 HNSB 3SUN45HB -5aB S4 aB U5

I MN UN W TSUN N2Ua2 5e-55ea Ia H2SUN-N HI UX3-SUNHX5ea
SBW B3 W3SUNHX5ea UN5 a VB 35 Ba U2IUW5e-Ba Ia BWUNSH
WBX3a -5aBXH W TN5ea N2Ua2 apaN55e-5aBMMN-N
WI U aN5-SUNIHawB3 B5ea U 12a aN5-SUNHXWI U aN5-SUN
-N aBMMN3HNSB2 a-WBaW U2 UNU Ua aBMMN Ba2 5aI
U 1-35W , N Ba -UNU U 1-35W U2 a 2aW5e-NW NX3-N5

a HN2 WBN ea 1HaNSU2U 1-35HX5ea BHa35HNWI U aN5-SUN
-N aBMMN U2aW5e-NW NX3-N5

S 4 WNSU2aBMMN-N WI U aN5-SUN - HB3 BI BN
/BIUN -N a 3-p-SUN-WBU5aI Ue 3HNSB 3SUNHX- Na -33aWBHI W
-55ea I- -N U aIU5a2 1V5a-

- HaNSU2T 1-35 ea BHa353H 2 BaW2UNaBMMN-N
WI U aN5-SUNI BN /BIUN -N a 3-p-SUNHX- Na -33aWBHI
-54apaN - W - ea 1HaNSU2U 1-35WHX5ea BHa35HN
aBMMN-N WI U aN5-SUN3- WI /BIUN -N a 3-p-SUN
-35pU5aW-WBU5aI Ue 3HNSB 3SUNHX- Na -33aWBHI -55ea
I- -Ba IUW WI UN5ea BXSSTR -51-/aW -N
-N UN5ea MN-2STR -51-/aW -N

T 1-35 BBBSH UU-SUN HaNSU2 WNX3-N5

3 UU-SUN a-WBa ea BHa35 U2UNBHEHB5a UU-SUN
a-WBa S UN4a3SUN -N HX5ea BX
MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-SUNW
-Be
Tg S4 SR S T T -/a

STR e3e 2aNBa 5e-5 aXBa a/UNNV 3HNSB 35UN -
WI U aN5 5UN-N aBWFN3HNSB212-N -N - 4g 2 a
1Ba1-Ba1 NUG aVaN-N W 5aI 5H5a 4, Rg XB
-11Bp-2 g eaBa 1HWU2a aBWFN3HNSB2 a-WBaW 2 a
U 12a aNaI NUG aVaN aXBa a/UNNV HB UN5ea B UN
W-WN -N 5H UNU Ua W5B 5aB U 1-35W-WBU5aI 5e
aBWFN-N HXXW5a W5-5UNHX5ea 4, R W-N-B aBWFN-N
WI U aN53HNSB2X-5 BaW 2 a WI I BN -N U aIU5a2
-XaB/BIUV -N a 3-p-5UNW, 4g UW Ba Ua aN5HX5ea
aNab2 HNSB 35UN45B -5aB S4 aB U

I MINUV W NUG aVaNe-pa a2U UN 5aI XH 5ea BHa355ea
Ba2B-5UNHX- 2a W35UNHX5ea 4 S -33aWBHI U 1-35W
XH 5eUWa2a aN5IUW WI UN5ea BXSSTR 25eaBaXBa NH
2IN aBIB3 B MBBa2B-5UNHXg -B 41BN W 33aWRHI -N
3HNSB 35UNHX5ea Na UN5 a VB 35 Ba -33aWBHI -55ea I-
U 12a aN5 5UNHX-11BIB5a aBWFN3HNSB2 a-WBaW UaI
S I BN 3 5-N X2/BIUV HlaB 5UNWaBWFN
Ba2 5aI U 1-35W H 2 a UNU UaI , N Ba -UNU U 1-35W 2
a 2aW5e-NW/NX3-N5

a HN2 WFN ea 1HaNU2U 1-35HX5ea BHa35HN WI U aN5 5UN
-N aBWFNU2aW5e-NW/NX3-N5

4-N5 , N RpaB HNSB 35UN, Ba-

S 4 WNU2aBWFN-N WI U aN5 5UN - HB3 BI BN
/BIUV -N a 3-p-5UN-35pUaW WBU5aI 5e 3HNSB 35UNHXNa
1Ua2NaW-N Ba2 5aI -11 BaN-NBaW25UN UNW/NX3-N5U 1-35W

- HANU2T 1-35 ea BHa353H 2 BaW25UNaBWFN-N
WI U aN5 5UNI BN /BIUV -N a 3-p-5UNHXNa 1Ua2NaW-N
Ba2 5aI -11 BaN-NBaW ea 1HaNU2U 1-35WX5ea BHa35HN
aBWFN-N WI U aN5 5UNI BN /BIUV -N a 3-p-5UN-35pUaW
-WBU5aI 5e 3HNSB 35UNHXNa 1Ua2NaW-N Ba2 5aI
-11 BaN-NBaW Ba IUW WI UN5ea BXSSTR -51-/aW -N

T 1-35 BHBH U-5UN HANU2 W/NX3-N5

3 U-5UN a-WBa ea BHa35 2UNBHBHB 5a U-5UN
a-WBa S UN4a35UNW -N HX5ea
BXSSTR -N UN4a35UN 1-/a HX5ea MN2STR e3e
2aNBa 5e-5 aXBa a/UNNV 3HNSB 35UN NUG aVaN 2
1Ba1-Ba1 -N W 5H5a 4, Rg XB-11Bp-2 -
WI U aN5 5UN-N aBWFN3HNSB212-N -N - 4g g eaBa
1HWU2a aBWFN3HNSB2 a-WBaW 2 a U 12a aNaI

MINUV WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

Nug aVaN aXB a/ UNUN HB UN5ea BUN W-WN5H
UNU Ua W5B 5aB U 1-35W WBU5aI Ue aBWN-N HXW5a
W5-5UNHX5ea 4, R 45-N-B aBWN-N WI U aN53HNB2
X5-5 BW U2 a WI I BN -N U aIU5a2 -XaB/ BIUN -N
a 3-p-5UNW, 4g UW Ba UB aN5HX5ea aNaB2
HN5B 35UN45B -5aB S4 aB U

I MNUNW U 12a aNUN aBWN3HNB2-N -5aB -25
1B5a35UN a-WBa UB I NaB S I BN
3HN5B 35UN aBWNBa2-5aI U 1-35WUN5ea 4-N5, N RpaB
HN5B 35UN, Ba- H 2 a BaI 3aI 5H- 2apa2HX2aW5e-N
WUNX3-N5, N Ba -UNUN U 1-35W U2 a 2aW5e-NWUNX3-N5

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNWI U aN5-5UN
-N aBWNUN2aW5e-NWUNX3-N5

S W5e-Ba HX/ BN -5aBXH Ia -5aBN a2W BN
a 3-p-5UN-35pUaW3H 2 3- W W W5NU2W5B 5aB WI U aN5WH B
-N aBWN-5ea 1HN5HXI W5e-Ba BaW2UN UNWUNX3-N5 U 1-35W

- HaNU2T 1-35 ea BHa353H 2 BaW2UNWI U aN5WH B-N
aBWN-55ea 1HN5HXI W5e-Ba ea 1HaNU2U 1-35WX5ea
BHa35HNW5B 5aB WI U aN5WH B-N aBWN3- WI -Ba
I W5 WI UN5ea B XSTR -51-/aW -N -N

T 1-35 B5B5H U5-5UN HaNU2 WUNX3-N5

3 U5-5UN a-WBa ea BHa35 U2UN5HB 5a U5-5UN
a-WBa S UN4a35UN -N HX5ea B X
STR -N UN4a35UN 1-/a HX5ea MN2STR e3e U2
aNWBa 5e-51B5B5H Ia -5aBN a2W BN a 3-p-5UN-35pUaW
Nug aVaN U2I UB355ea 3HN5B 35B5HUN5-2aNaB
I UWI-5UNI apUaW-5I W5e-Ba 1HN5WH1BapaN5aBWN
4aIU aN5-5UN -WNW U2 a WI -5Ia -5aBN I W5e-Ba 1HN5W
5H1BapaN5a 3aW5H N5Ba- WI U aN5-5UN ea -WNW U2 a
3HN5B 35aI aXB Ia -5aBN -N Ba/ 2B2 -UN5-UNaI I BN
3HN5B 35UN UN2 I UN -XaB5HB apaN5W5H aa1 5ea UN/HH
HB UN HB aB, HN5HB U2paBX aX535pa HlaB 5UNHXaNaB
I UWI-5UNX5-5 BW BN Ia -5aBN

I MNUNW Ra UN 5ea UN5-2-5UNHXaNaB I UWI-5UNI apUaW
1B5B5H Ia -5aBN -35pUaW NaB S H 2 1BpUa
-11BIBJ5a aBWN3HNB2 a-WBaW BN a 3-p-5UN-35pUaW
5e-5UNpHpa Ia -5aBN a2W, N Ba -UNUN U 1-35W U2 a 2aW
5e-NWUNX3-N5

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HN1HaNU2

MNUN WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

WI U aN5-5UN-NI aBHMFNW2aW5e-NW/NX3-N5

S S 3-p-5UNHX2-B a 5a 1HB B WHI aWHI-33H HI -5a
1Ua2Na UN5-2-5UN -5/ BI l aN5W-W5a1 -W UN N5 2a / aH2Y U
N5W3H 2 B aW25 UNW/NX3-N5 U 1-35W-WBU5aI Ue HN W5a 2-N WU aW
HB3H2-1W

- H5aNU2T 1-35 ea BHa353H 2 B aW25 UNHN W5a 2-N WU aWB
3H2-1W/WXH 5ea a 3-p-5UNHX5a 1HB B WHI aW ea 1H5aNU2
U 1-35WX5ea BHa35- WBU5aI Ue HN W5a 2-N WU aWB3H2-1W
-B I U5 W5I UN5ea B XSTR -51- / a

T 1-35 BHBSH U-5UN H5aNU2 W/NX3-N5

3 U-5UN a-WB ea BHa35 U2UN8H H5a U-5UN
a-WB aW S UN4a35UN HX5ea B XSTR eUe
U2aNBa 5e-5 NUg aW5aBN U2U 12a aN5B3H aN-5UNW
aW 2W aI UN- W5a Wa3UX3 / aH5a3eN3-2B1H5 1B a1-B aI -
-2XaI / aH5a3eN3-2aN UNaaBH BaN UNaaBN / aH2Y U5 ea
B a1H5 B a3H aN-5UNW U2 a -W I HN- 3H 1B e aN W5a
ap-2 -5UNHXWHI a W U5 WUW U -N W I 23HN U5UNW5e-5 -
-X5353HN5B 35UNHX5ea 1Ua2NaW-N B a2-5aI X3U5aW ea
B a3H aN-5UNW U2 a 3HNW5aN5 Ue 1B p UWHNWX5ea
-2XBNJ HI a HXRa/ 2-5UNW U2a HN5B 35UN4-X5
B aBW BHa35/ B I U5 -N a 3-p-5UNW U2 a H W5aI -
/ aH5a3eN3-2aN UNaaB aN UNaaBN / aH2Y U5HBH5eaB -2XaI
B a1B aW N5-5pa 5HpaBX 3H 12JNa Ue B a3H aN-5UNW HX5ea
/ aH5a3eN3-2B1H5 ea / aH5a3eN3-2U pa WU-5UN U2 a
3H 12a5aI UN-33HB-NBa Ue 41a3U2 23-5UN
*Guidelines for Evaluating and Mitigating Seismic Hazards in
California* -N 4H 5eaBN -2XBNJ S-B e - a
aN5aB *Recommended Procedures for Implementation of DMG
Special Publication 117 Guidelines for Analyzing and Mitigating
Liquefaction in California* 4 S

I MNI UN W ea a 3-p-5UNHX2-B a 5a 1HB B WHI aWHI
-33H HI -5a 1Ua2Na UN5-2-5UN -5/ BI l aN5W-W5a1 -W UN
N5 2a / aH2Y U N5W3H 2 B aW25 UNWHI a XU2 B a -N -WBU5aI
I U5B 15UNHX3HN5B 35UN I- -/ a 5Ha U aN5 -N 1HWU2a
UN B 5H HB aBW T 12a aN5-5UNHXW5a Wa3UX3
B a3H aN-5UNW5a U5aI N aB S U21B p U a
-11BH I B U5a WHI a W U5 a-WB aW BN a 3-p-5UN-35p U5aW
B aI 3UN 5ea 1H5aNU2U 1-35WH aH 5ea 5eB aWHI HX
W/NX3-NBa , N B a -UNW U 1-35W U2 a 2aW5e-NW/NX3-N5

a HN2 W5IN ea 1H5aNU2U 1-35HX5ea BHa35HN aX535W
-WBU5aI Ue HN W5a 2-N WU aWB3H2-1W U2a W5e-N

MNI UN WE STR XB4-N5 , N R l paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/ a

W/NX3-N5

S BH353HNSB 35UNUN5ea 4-N5 , N RpaB HNSB 35UN
Ba- H 2 BaW2UN- 2HWHX-p-2 U5 HX- NH N UNaB2BaWI Ba

- HaN5U2T 1-35 ea BH353H 2 BaW2UN- 2HWHX-p-2 U5
HX- NH N UNaB2BaWI Ba ea 1HaNSU2U 1-35WHX5ea BH35
HN5ea -p-2 U5 HX- NH N UNaB2BaWI Ba -Ba IUW WAI UN5ea
BXSSTR -51-/a

T 1-35 BHBSH UJ-5UN aW5e-NW/NX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMHaNSU2
U 1-35 a3- W BH35 Ba2-5aI 3HNSB 35UN H 2 N5BaW2UN5ea
2HWHX- NH N UNaB2BaWI Ba UN-11Ba3U 2a -NSUaWN
U 1-35W H 2 a 2aW5e-NW/NX3-N5

I MNUVW BH353HNSB 35UNUN5ea 4, R HNSB 35UN, Ba-
H 2 BaW2UN2HWHX-p-2 U5 HX- NH N UNaB2BaWI Ba ea
WI 5eaBN-N aWaBN1HBUNWHX5ea 4, R HNSB 35UN, Ba-
2B-5aI U5UN5ea BH1aB4-N5 , N g -W 2a UN-N-Ba-
32-WWaI -W UNaB2RaWI Ba HNa Ua -Ba-WHXUaN5UaI
UNaB2BaWI Ba W/NX3-NBa eUW Ba- 3HN5-UNW NH NBaWI BaW
HX3HN3Ba5a /BIa -//Ba/-5a -N 5ea 11aB4-N5 , N g -W e-W
aaNUaN5UaI -WHNa HX5ea aW5-//Ba/-5a I a1HM5WUN5ea 45-5a HX
-2XBNU H apaB 1Ua2UNa -N Ba2-5aI X3U5 3HNSB 35UN
H 2 HN2 1Ba32 Ia -33aW5H-//Ba/-5a UN- 3HBUIHB Ue -
- U U5e HX-11BH U -5a2 Xa5 eaBaXBa BH35
Ba2-5aI 3HNSB 35UN H 2 N5BaW2UN5ea 2HWHX-11Ba3U 2a
-NSUaWHX- NH N UNaB2BaWI Ba

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BH35HNaxa35W
-WBU5aI UNaB2BaWI BaWU2aW5e-NW/NX3-N5

3 apU -N HN HNSB 35UN, Ba-

S 4 W5N5U2aBMUN-N WIU aN5-5UN - HB3 BI BN
/BIUW -N a 3-p-5UN-35pU5aW WBU5aI U5 3HNSB 35UNHXNa
1Ua2UNaW-N Ba2-5aI -11 BaN-NBaWBaW2UN UNW/NX3-N5U 1-35W

- HaN5U2T 1-35 ea BH353H 2 BaW2UNaBMUN-N
WIU aN5-5UNI BN /BIUW -N a 3-p-5UNHXNa 1Ua2UNaW-N
Ba2-5aI -11 BaN-NBaW ea 1HaNSU2U 1-35WHX5ea BH35HN
aBMUN-N WIU aN5-5UN-Ba IUW WAI UN5ea BXSSTR -51-/aW
-N

T 1-35 BHBSH UJ-5UN HaNSU2 W/NX3-N5

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3 UJ-SUN a-WB ea BH35 U2UBHIB 5a UJ-SUN
a-WB S UN4a3SUN -N HX5ea BX
STR-N UN4a3SUN 1-/a HX5ea MD-2STR eUe U2
aNWB 5e-5 aXB a/ UNUN 3HNSB 3SUN NUG aVaN U2
1B1-B-N W U5H5ea 4, Rg XB-11Bp-2 -
WIU aN5-SUN-N aBMIN3HNSB212-N -N - 4g g eaB
1HWU2a aBMIN3HNSB2 a-WBW U2 a U 12a aNaI
NUG aVaN aXB a/ UNUN HB UN5ea BUN W-WN -N SH
UNU Ua WBS 5aB U 1-35W WBU5aI Ue aBMIN-N HXW5a
W5-SUNHX5ea 4, R W-N-B aBMIN-N WIU aN53HNSB2
Xa-5 BW U2 a WI I BN -N U aIU5a2 -XaB/ BIUN -N
a 3-p-SUNW, 4g UW B UB aN5HX5ea aNaB2
HNSB 3SUN4SB -5aB S4 aB U

I MN UN W Ra UN U 12a aN5-SUNHXaBMIN3HNSB2-N -5aB
-25 1B5a3SUN a-WBW NaB S I BN 3HNSB 3SUN
U2BI 3a 5ea U 1-35W2UN XH 5ea/ BI NI IUS B-NBa
I BN 3HNSB 3SUN, N B -UNU U 1-35W U2 a 2W5e-N
WUNX3-N5

a HN2 WJN ea 1HaNU2U 1-35HX5ea BH35HNaBMIN-N
WIU aN5-SUNU2aW5e-NWUNX3-N5

S U5e-B a HX/ BI N -5aBXH Ia -5aBN a2W BN
a 3-p-SUN-35pUaW3H 2 3- W W W-NU2WBS 5aB WIU aN5WH B
-N aBMIN-N 5ea 1HNSHXI U5e-B a BW2UN UNWUNX3-N5U 1-35W

- HaNU2T 1-35 ea BH353H 2 BW2UN WIU aN5WH B-N
aBMIN-55ea 1HNSHXI U5e-B a ea 1HaNU2U 1-35WX5ea
BH35HNWBS 5aB WIU aN5WH B-N aBMIN3- WI -B
IUS WI UN5ea BXSSTR -51-/aW -N -N
-N

T 1-35 BHBSH UJ-SUN HaNU2 WUNX3-N5

3 UJ-SUN a-WB ea BH35 U2UBHIB 5a UJ-SUN
a-WB S UN4a3SUN -N HX5ea BX
STR-N UN4a3SUN 1-/a HX5ea MD-2STR eUe U2
aNWB 5e-51BHBSH Ia -5aBN a2W BN a 3-p-SUN-35pUaW
NUG aVaN U2I UB355ea 3HNSB 3HBSHUNW 2aNaB
I UWI-SUNI apUaW-5I U5e-B a 1HNSWH1BpaN5aBMIN
4aIU aN5-SUN -WNW U2 a WI -5Ia -5aBN I U5e-B a 1HNSW
SH1BpaN5a 3aWVH N5a- WIU aN5-SUN ea -WNW U2 a
3HNSB 3aI aXB Ia -5aBN -N B/ 2-B -UN5-UNaI I BN
3HNSB 3SUN UN2 IUN -XaBVBH apaN5W5H aal 5ea UN/ HI
HB UN HB aB, HNSB U2paBX aXa35pa HIaB SUNHXaNaB
I UWI-SUNXa-5 BW BN Ia -5aBN

MN UN WE STR XB4-N5, N RUpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

I MNI UN W Ra UNV 5ea UNV 22-5UNHXaNaB I UWI-5UN IapUaW
1BHBSHI a -5aBN -35pUaW NaB S H 2 1BpUa
-11BH BJa aBHMN3HNSH2 a-WBaW BN a 3-p-5UN-35pUaW
5e-5UphQpa Ia -5aBN a2W, N Ba -UNU U 1-35W U2 a 2aW
5e-NW/NX3-N5

a HN2 WJN ea 1HaNSJ2U 1-35HXea BHa35HN1HaNSJ2
WI U aN5-5UN-N aBHMNUNaW5e-NW/NX3-N5

S S 3-p-5UNHX2-B a 5a 1HB B VHIaW5H-33H HI-5a
1Ua2Na UNV 22-5UN -5/BI laNSW W5a1 -W UN NV 2a/aH2Y U
N5W3H 2 BaW5UNW/NX3-N5 U 1-35W-WBU5aI Ue HN W5a 2-N WUaW
HB3H2-1W

- HaNSJ2T 1-35 ea BHa353H 2 BaW5UNHN W5a 2-N WUaWB
3H2-1W/WXH 5ea a 3-p-5UNHX5a 1HB B VHIaW ea 1HaNSJ2
U 1-35WX5ea BHa35-WBU5aI Ue HN W5a 2-N WUaWB3H2-1W
-Ba IUV WI UN5ea B XSTR -51-/aW -N

T 1-35 BHBSH UJ-5UN HaNSJ2 W/NX3-N5

3 UJ-5UN a-WBa ea BHa35 U2UN8HIB 5a UJ-5UN
a-WBaW S UN4a35UN HX5ea B XSTR eUe
U2aNBa 5e-5 NUg aV5aBN U2U 12a aN5Ba3H aN-5UNW
aV 2W aI UN- W5a Wa3UX3/aHa3eN3-2Ba1H5 1Ba1-Ba -
-2XaI/aHa3eN3-2aN UNaaBHBaN UNaaBN/aH2Y U5 ea
Ba1H5Ba3H aN-5UNW U2 a -WI HN-3H 1BaeanWpa
ap-2-5UNHXVHIa V U5 WUW U -N WI23HN 5UNW5e-5 -
-Xa353HN5B 35UNHX5ea 1Ua2NaW-N Ba2-5aI X3U5aW ea
Ba3H aN-5UNW U2 a 3HNW5aN5 Ue 1BpUWHNWX5ea
-2XBNU HI a HXRa/ 2-5UNW U2a HN5B 35UN4-X5
BaBW BHa35/BIUN -N a 3-p-5UNW U2 a H WpaI -
/aHa3eN3-2aN UNaaBaN UNaaBN/aH2Y U5HBFeaB -2XaI
Ba1BaW5-5pa 5HpaBX 3H 12UNBa Ue Ba3H aN-5UNW5e-5
/aHa3eN3-2Ba1H5 ea/aHa3eN3-2U5paWU-5UN U2 a
3H 12a5aI UN-33HB-NBa Ue 41a3U2 23-5UN
*Guidelines for Evaluating and Mitigating Seismic Hazards in
California* -N 4H 5eaBN -2XBNU S-Be - a
aN5aB *Recommended Procedures for Implementation of DMG
Special Publication 117 Guidelines for Analyzing and Mitigating
Liquefaction in California* 4 S

I MNI UN W ea a 3-p-5UNHX2-B a 5a 1HB B VHIaW5H
-33H HI-5a 1Ua2Na UNV 22-5UN -5/BI laNSW W5a1 -W UN
NV 2a/aH2Y U N5W3H 2 BaW5UNVHIa XU Ba -N -WBU5aI
IUB 15UNHX3HN5B 35UN I- -/a 5Ha U aN5-N 1HWU2a
UN B 5H HB aBW ea U 12a aN5-5UNHXW5a Wa3UX3

MNI UN WESTR XB4-N5, N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

Ba3H aN-5UNW NaB S U21BpUa-11BHBU5a
VHla V U5 a-WBaW BN a 3-p-5UN-35pUaWBI 3UN 5ea
1HaNU2U 1-35WH a2H 5ea 5eBaWHI HXWNU3-NBa , N
Ba -UNU U 1-35W U2 a 2aW5e-NWNU3-N5

a HN2 WJN ea 1HaNU2U 1-35HX5ea BH35HNaXa35W
-WBU5aI U5e HN W5a 2-NI WUaWB3H2-1W UWaW5e-N
WNU3-N5

I 52a Ba HNB 35UN, Ba-

S 4 WNU2aBMJN-N WIU aN5-5UN - HB3 BI BN
/BIUW -N a 3-p-5UN-35pUaW WBU5aI U5e 3HNB 35UNHXNa
1Ua2NaW-N Ba2-5aI -11 BaN-NBaW25UN UNWNU3-N5U 1-35W

- HaNU2T 1-35 ea BH353H 2 BaW25UNaBMJN-N
WIU aN5-5UNI BN /BIUW -N a 3-p-5UNHXNa 1Ua2NaW-N
Ba2-5aI -11 BaN-NBaW ea 1HaNU2U 1-35WHX5ea BH35HN
aBMJN-N WIU aN5-5UN-Ba IUW WI UN5ea BXSSTR -51-/aW
-N

T 1-35 BHBSH UJ-5UN HaNU2 WNU3-N5

3 UJ-5UN a-WBa ea BH35 U2UNBHEHB5a UJ-5UN
a-WBa S UN4a35UN -N HX5ea BXS
STR-N UN4a35UN 1-/a HX5ea MN-2STR eU5e U2
aNBa 5e-5 aXB a/UNUW 3HNB 35UN NUg aVaN U2
1Ba1-Ba -N W U5H5ea 4, Rg XB-11Bp-2 -
WIU aN5-5UN-N aBMJN3HNB212-N -N - 4g g eaBa
1HWU2a aBMJN3HNB2 a-WBaW U2 a U 12a aN5aI
NUg aVaN aXB a/UNUW HB UN5ea BUN W-WN -N SH
UNU Ua WHB55aB U 1-35W WBU5aI U5e aBMJN-N HXW5a
W5-5UNHX5ea 4, R W-N-B aBMJN-N WIU aN53HNB2
Xa-5 BaW U2 a WI I BN -N U aIU5a2 -XaB/BIUW -N
a 3-p-5UNW, 4g UW Ba Ua aN5HX5ea aNaB2
HNB 35UN45HB -5aB S4 aB U5

I MNUW Ra UNU U 12a aN5-5UNHXaBMJN3HNB2-N -5aB
-25 1Ba35UN a-WBaW BN 3HNB 35UN NaB S
U2BaI 3a 5ea U 1-35W25UN XH 5ea /BH NI IUW B-NBa
I BN 3HNB 35UN , N Ba -UNU U 1-35W U2 a 2aW5e-N
WNU3-N5

a HN2 WJN ea 1HaNU2U 1-35HX5ea BH35HNaBMJN-N
WIU aN5-5UNUW2aW5e-NWNU3-N5

S U5e-Ba HX/ BH N -5aBXH Ia -5aBN a22M BN

MNUW WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a 3-p-5UJN-35pUaW3H 2 3- W W W NSU2WH55aB WIU aN5WH B-N
aBWN-NI 5ea 1HN5HXI UWe-B a B W25UW UNWNU3-N5U 1-35W

- HaN5U2T 1-35 ea BH353H 2 B W25UNWIU aN5WH B-N
aBWN-55ea 1HN5HXI UWe-B a ea 1HaNSU2U 1-35WHX5ea
BH35HNWH55aB WIU aN5WH B-N aBWN3- WI -B
I UW WI UN5ea B XSTR -51-/aW -N -N

T 1-35 BHBSH UJ-5UJN HaNSU22 WNU3-N5

3 UJ-5UJN a-WB ea BH35 U2UN3HEHB5a UJ-5UJN
a-WB S UN4a35UJN -N HX5ea BX
STR -N UN4a35UJN 1-/a HX5ea MN2STR eUe U2
aNWB 5e-51BHBSH1a -5aBN a2W BN a 3-p-5UJN-35pUaW
NUg a5aBN U2I U355ea 3HNB 35HB5HUNW 2aNaB
I UWI-5UJN1apUaW5I UWe-B a 1HN5WH1BapaN5aBWN
4aIU aN5UJN -WUW U2 a WI -5Ia -5aBN I UWe-B a 1HN5W
SH1BapaN5a 3aWU H N5a- WIU aN5UJN ea -WUW U2 a
3HNB 35aI aXB1a -5aBN -N B/ 2E2 -UN5UaI I BN
3HNB 35UJN UN2 I UW -5aBWB apaN5WH aal 5ea UN/HH
HB UN HB aB , HNSHB U2paBX aX35pa H1aB 5UJNHXaN5aB
I UWI-5UJNX-5 B W BN Ia -5aBN

I MN UN W Ra UN 5ea UNW 2-5UJNHXaN5aB I UWI-5UJN1apUaW
1BHBSH1a -5aBN -35pUaW H 2 1BpUa-11BH1B5a aBWN
3HNB2 a-WB W BN a 3-p-5UJN-35pUaW5e-5UJHpa
Ia -5aBN a2W UJ-5UJN U2B1 3a 5eUW 1-35SH a2H 5ea
5eBWHI HXWNU3-N5a , N B -UNU U 1-35W U2 a 2aW5e-N
WNU3-N5

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BH35HN1HaNSU2
WIU aN5UJN-NI aBWNUNW2aW5e-NWNU3-N5

S S 3-p-5UJNHX2-B a 5a 1HB B WH1aWH-33H HI -5a
1Ua2Na UNW 2-5UJN -5/BIaNSW W5a1 -W UN N5 2a/aH2Y U
N5W3H 2 B W25UNWNU3-N5U 1-35W-WBU5aI Ue HN W5a 2-N WUaW
HB3H2-1W

- HaN5U2T 1-35 ea BH353H 2 B W25UNHNW5a 2N WUaWB
3H2-1W WXH 5ea a 3-p-5UJNHX5a 1HB B WH1aW ea 1HaNSU2
U 1-35WHX5ea BH35-WBU5aI Ue HN W5a 2-N WUaWB3H2-1W
-B I UW WI UN5ea B XSTR -51-/aW 5H

T 1-35 BHBSH UJ-5UJN HaNSU22 WNU3-N5

3 UJ-5UJN a-WB ea BH35 U2UN3HEHB5a UJ-5UJN
a-WB W S UN4a35UJNW -N HX5ea

MN UN WE STR XB4-N5 , N R(paBg -5aBRUe5, 1123-5UJNW
-Be

Tg S4 SR S T T -/a

BXSTR eUe UaNBa 5e-5 Nug aVaBN U2U 12a aN5
Ba3H aN-5UNWav 2Wai UN- Wa Wa3U3 /aHa3eN3-2Ba1H5
1Ba1-BaI - -2XaI /aHa3eN3-2aN UNaaBHBaN UNaaBN
/aH4Y U5 ea Ba1H5 Ba3H aN-5UNW U2 a -W1 HN-
3H 1Ba3aWpa ap-2 -5UNHXVH1a W U5 WUW U -N W12
3HN 5UNW5e-5 - -Xa353HN5B 35UNHX5ea 1Ua2UNaW-N Ba2-5aI
X3U5aW ea Ba3H aN-5UNW U2 a 3HNW5aN5 Ue 1BpUW1NW
HX5ea -2XBN H1a HXRa/ 2-5UNW U2a HN5B 35UN4-X5
BaBW Ba35/BIUN -N a 3-p-5UNW U2 a H WpaI -
/aHa3eN3-2aN UNaaB aN UNaaBN /aH4Y U5HBH5eaB -2XaI
Ba1BaW5-5pa 5HpaBX 3H 12UNa Ue Ba3H aN-5UNW5ea
/aHa3eN3-2Ba1H5 ea /aHa3eN3-2UNpaWU-5UN U2 a
3H 12a5aI UN-33HB-NBa Ue 41a3U2 23-5UN
*Guidelines for Evaluating and Mitigating Seismic Hazards in
California* -N 4H 5eaBN -2XBN S-Be - a
aNaB *Recommended Procedures for Implementation of DMG
Special Publication 117 Guidelines for Analyzing and Mitigating
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I MNUNW ea a 3-p-5UNHX2-B a 5a 1HB B VHIaW5H
-33H H-5a 1Ua2UNa UN5-2-5UN -5/BIIdN5W-W5a1-W UN
N5-2a/aH4Y U N5W3H 2 BaW2UNVH1a XU Ba-NI-WBU5aI
IUB 15UNHX3HN5B 35UN I- -/a 5Ha U aN5-N 1HWU2a
UN B 5H HB aBW ea U 12a aN5-5UNHXW5a Wa3U3
Ba3H aN-5UNW NaB S U21BpUa-11BH1BU5a
VH1a W U5 a-WBaW BN a 3-p-5UN-35pU5aWPaI 3UN 5ea
1HaNU2U 1-35W5H a2H 5ea 5eBaWH2 HXWUNU3-NBa , N
Ba -UNU U 1-35W U2 a 2aW5e-NWUNU3-N5

a HN2 WJN ea 1HaNU2U 1-35HX5ea Ba35HNax35W
-WBU5aI Ue HN W5a 2-N WUaWB3H2-1W U2aW5e-N
WUNU3-N5

Ba35 1aB 5UN-N -UN5aN-NBa

- 4-N5 , N RpaB HN5B 35UN, Ba-

S ea 4-N5 , N RpaB HN5B 35UN, Ba- U2B-5aI HN-
/aH4Y U N55e-53H 2 a3H a N5-2aI a 5HI U5aBN5U2W55a aN5
-WBU5aI Ue 5ea Ba35 -N 1HaNU2 BaW2UN3H2-1W

- HaNU2T 1-35 ea Ba353H 2 BaW2UN5ea 3H2-1W HX-N
N5-2a/aH4Y U-2 N5 ea 1HaNU2U 1-35W5ea Ba35HN
5ea W U5 HX- /aH4Y U N5-Ba IUY W1 UN5ea BXSTR -5
1-/a

T 1-35 BHBSH UU-5UN aW5e-NWUNU3-N5

MNUNWESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3 UJ-SUN a-WB H UJ-SUNUBA UI XBSeUMHfANUJ2
U 1-35 a3- W U 1-35WB2-5aI SHIUXaBANSU2W55a aN5-WWBU5aI
Ue 5ea BHa35-Ba 2aW5e-NWUNX3-N5

I MNUV W ea 1BH HMI 1Ua2UNaW-Ba 2FB-5aI HN-22 pU eUe
UWU a35SH5a35HN3 W WJaNa -N IUXaBANSU2W55a aN5
H apaB 5ea 1Ua2UNaW H 2 a NaB-UN - aI HX
WN -//Ba/-5a SH3 WUN5ea 1Ua -N 1BpUa - NXB 2
3H 1-35aI W12WBK3a HNH eUe 5ea 1Ua H 2 a 2-U 5e W
UNU UUV U 1-35W a SH5a35HN3 W WJaNa -N IUXaBANSU2
W55a aN5 T 1-35W-Ba 2aW5e-NWUNX3-N5

a HN2 WUN ea 1HfANUJ2U 1-35HX5ea BHa35Ba2-5aI SH5a35HN3
W WJaNa -N IUXaBANSU2W55a aN5 UW2aW5e-NWUNX3-N5

apU -N HN HNSB 35UN, Ba-

S ea apU -N HN HNSB 35UN, Ba- UW2B-5aI HN-
/aHUY U N55e-53H 2 a3H a N5 2aI a SHIUXaBANSU2W55a aN5
-WWBU5aI Ue 5ea BHa35 -N 1HfANUJ2 BaW25UN3H2-1W

- HfANUJ2T 1-35 ea BHa353H 2 BaW25UN5ea 3H2-1W HX-N
N5 2a/aHUY U-2 N5 ea 1HfANUJ2U 1-35W5HX5ea BHa35HN
5ea W U5 HX- /aHUY U N5-Ba IUW WMI UN5ea BXSIR -5
1-/a

T 1-35 BUBSH UJ-SUN aW5e-NWUNX3-N5

3 UJ-SUN a-WB H UJ-SUNUBA UI XBSeUMHfANUJ2
U 1-35 a3- W U 1-35WB2-5aI SHIUXaBANSU2W55a aN5-WWBU5aI
Ue 5ea BHa35-Ba 2aW5e-NWUNX3-N5

I MNUV W g Ue 5ea a 3a15UNHXWBK3a X 25B 15 Ba HIaB SUN-2
WUW U 1-35W H 2 a W U 2-B 52aW5e-N5eHW I aWBUaI XB
5ea 4-N5 , N RUpaB HNSB 35UN, Ba- 4apaBa WUW U-22
UN 3aI /BH N W- UN 3H 2 BaW25UNB 15 Ba HX5ea apU
-N HN -W Ua2UNa , Ba2a-WHX -5aBXH 5ea XH5
IU a5aB1Ua2UNa H 2 2Ua2 N5I- -/a -N IH N5Ba-
WB 35 BaW TN UB35U 1-35W H 2 a 2aW5e-NWUNX3-N5-N NH
UJ-SUNUBA UI

a HN2 WUN ea 1HfANUJ2U 1-35HX5ea BHa35Ba2-5aI SH5a35HN3
W WJaNa -N IUXaBANSU2W55a aN5 UW2aW5e-NWUNX3-N5

S W5HB3 /BH N -5aB3HN UUNW3H 2 a 1HW WB 35 BaWUN
5ea apU -N HN HNSB 35UN, Ba- SHW W5N5U2-IpaBa aX35W
U5H2pUY WUW U-22 UN 3aI 2U aX35UN

MNUV WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

- HANU2T 1-35 ea BHa353H 2 BAW25UNWUW U-22 UN 3aI
2U aX35UN ea 1HANU2U 1-35HX5ea BHa35HN-IpaB
aX35WUWpHpUV WUW U-22 UN 3aI 2U aX35UN-Ba IUW WAI UN
5ea BXSTR -51-/a -N UN5ea MN2STR -51-/aW
5eH /e

T 1-35 BUBSH U-5UN aW5e-NWUNU3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHANU2
U 1-35 a3- W UNUBa35U 1-35W H 2 a 2aW5e-NWUNU3-N5

I MNUW W UHB3 / BH N -5aB3HN UUNW3H 2 a 1HW VB 35 BAW
UN5ea apU2 -N HN HNSB 35UN, Ba- SHW V-NU2-IpaB
aX35WUWpHpUV WUW U-22 UN 3aI 2U aX35UN ea BHa35
3HNSB 35UNWa UW2B-5aI UN-N-Ba- HX H aB5a eUHB3
2U aX35UNWwa15U25 Ra/ -B 2aW5HX BHa35 UN 3aI 3e-N aW
UN/ BH N -5aB2apa2W5ea 1BH HWA 1Ua20Na 3H 2 I BN
HlaB 5UN a W a35SH2U aX35UNUN5ea apaN5HX- 2-B a
a-5e - a 4aW U-22 UN 3aI 2U aX35UN3H 2 BAW25UN
B 15 Ba HX5ea apU2 -N HN -WW Ua20Na , Ba- W HX -5aB
XH 5ea XH5IU a5aB1Ua20Na H 2 N52Ua2 I- -/a-N
IH N5Ba- VB 35 BAW TN UBa35U 1-35W H 2 a 2aW5e-N
WUNU3-N5

a HN2 WUN ea 1HANU2U 1-35HX5ea BHa35Ba2-5aI SH
WUW U-22 UN 3aI 2U aX35UNW2aW5e-NWUNU3-N5

3 5a Ba HNSB 35UN, Ba-

S ea 5a Ba HNSB 35UN, Ba- UW2B-5aI HN- /aH2Y U
N55e-53H 2 a3H a N5 2a I a SH UXBANU2W55a aN5-WWBU5aI
Ue 5ea BHa35 -N 1HANU22 BAW25UN3H2-1W

- HANU2T 1-35 ea BHa353H 2 BAW25UN5ea 3H2-1W HX-N
N5 2a /aH2Y U-2 N5 ea 1HANU2U 1-35HX5ea BHa35HN
5ea W U25 HX- /aH2Y U N5-Ba IUW WAI UN5ea BXSTR -5
1-/a

T 1-35 BUBSH U-5UN aW5e-NWUNU3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHANU2
U 1-35 a3- W U 1-35W2-5aI SH UXBANU2W55a aN5-WWBU5aI
Ue 5ea BHa35-Ba 2aW5e-NWUNU3-N5

I MNUW W 4apaBa WUW U-22 UN 3aI /BH N W- UN 3H 2 BAW25
UNB 15 Ba HX5ea 4-N - Bd2 -2a N3U-2g -5aB U5B35
5a Ua20Na -N 5ea -35 W -WVW Ua20Na , Ba- W HX -5aB

MNUW WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

XH 5ea XH5IU a5aB1Ua2UaW H 2 2Ua2 N5I- -/a -N
IH N5a- WB 35 BaW TN Ua35U 1-35W H 2 a 2aW5e-N
W/NX3-N5

a HN2 WJN ea 1H5aNU2U 1-35HX5ea BH35Ba2 5aI 5H5a35HN3
W W/aNa -N I U5aBaNU2W55a aN5UW2aW5e-NW/NX3-N5

I 4-N aB+B UNH -WN, Ba-

S ea WBX3a -Ba- a 1HMI 5H2U aX35UN1H5aNU2 UeUN
5ea BaW5Ba HNa HX4-N aB+B UNH -WN, Ba- NaB-22 BH35
WaN-BJHW2aW5e-N NaB H BH353HN U5UNW

- H5aNU2T 1-35 ea BH35 U2BaW25UN- BaI 35UNHX5ea -Ba-
UeUN5ea BaW5Ba HNa a 1HMI 5H2U aX35UN eUWU 1-35UW
I U5 WMI UN5ea BXSSTR -51-/a -N UN5ea MN2STR -5
1-/aW 5eBH /e

T 1-35 BJBSH U5U-5UN aNaX3U2

3 U5U-5UN a-WBa H U5U-5UNUBa UBaI XB5eUMH5aNU2
U 1-35 a3- W 5ea U 1-35UW aNaX3U2

I MNUVW NaB-22 BH35WaN-BJHW5eaBa UW Na5BaI 35UNUN
5ea -Ba- UeUN5ea BaW5Ba HNa HX5ea 4 , a 1HMI 5H5ea
1H5aNU2XB2U aX35UN

a HN2 WJN ea 1H5aNU2U 1-35HX5ea BH35HNaXa35W
-W5BU5aI Ue 2U aX35UNUW aNaX3U2

S 4 BX3a -Ba- a 1HMI 5H2U aX35UN1H5aNU2H 5WUa 5ea
BaW5Ba HNa HX5ea 4-N aB+B UNH -WN, Ba- NaB-22 BH35
WaN-BJHW2aW5e-N NaB H BH353HN U5UNW

- H5aNU2T 1-35 ea BH35 U2BaW25UN- BaI 35UNHX5ea -Ba-
H 5WUa 5ea BaW5Ba HNa a 1HMI 5H2U aX35UN eUWU 1-35UW
I U5 WMI UN5ea BXSSTR -51-/a -N UN5ea MN2STR -5
1-/aW 5eBH /e

T 1-35 BJBSH U5U-5UN aNaX3U2

3 U5U-5UN a-WBa H U5U-5UNUBa UBaI XB5eUMH5aNU2
U 1-35 a3- W 5ea U 1-35UW aNaX3U2

I MNUVW NaB-22 BH35WaN-BJHW5eaBa UW Na5BaI 35UNUN
5ea -Ba- H 5WUa 5ea BaW5Ba HNa HX5ea 4 , a 1HMI 5H5ea
1H5aNU2XB2U aX35UN

MNUVW ESTR XB4-N5 , N R5paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a HN2 WJN ea 1HfaNU2U 1-35HX5ea BH35HNaX35W
-WBU5aI Ue 2U aX35UNUW aNaX3U2

E. Land Use and Planning

BHa35 1aB 5UN-N -UNfaN-NBa

- 4-N aB-N B UNH -WN, Ba-

TNBa-WWON/ BH NI -5aB2apa2WI a 5H BH35HlaB 5UNW3H 2
3HNX35 Ue a U5UN 2-N W-W-N 2U U5X5 Ba W HX1BHlaB UN5ea
BaWBa HNa HX5ea 4-N aB-N B UNH -WN, Ba-

- HfaNU2T 1-35 ea BH353H 2 3HNX35 Ue a U5UN 2-N
W-W-N 2U U5X5 Ba W HX1BHlaB ea 1HfaNU2U 1-35WHX5ea
BH35HNa U5UN 2-N W-W-N 1HfaNU2U U5WHX5 Ba W HX
1BHlaB UN5ea BaWBa HNa HX5ea 4 , -Ba I U5 W WI UN5ea
B XSTR -51-/a

T 1-35 BUBSH U5U-5UN aW5e-NWUNX3-N5

3 U5U-5UN a-WBa H U5U-5UNUBa UBaI XB5eUMHfaNU2
U 1-35 a3- W 5ea B W UN5 53 / BH NI -5aB2apa2W H 2 e-pa -
2aW5e-NWUNX3-N5U 1-35HN5ea 1BHlaB UN5ea BaWBa HNa HX
5ea 4 ,

I MNI UN W TNBa-WWON/ BH NI -5aB2apa2WI a 5H BH35
HlaB 5UNW3H 2 3HNX35 Ue a U5UN 2-N W-W-N 2U U5X5 Ba
W HX1BHlaB UN5ea BaWBa HNa HX5ea 4 , ea UN5a/ B 5aI
WBX3a -5aB-N / BH NI -5aB H a2M apa2HlaI XB5ea BH35
aBa WI SHap-2 -5a 3e-N aWON/ BH NI -5aB2apa2W-5- N aB
HXUN a a2W-N WBa-I UN / BH NI W5eBH / eH 55ea 4 ,
UNB2 I UN a2WON5ea BaWBa HNa NaB3HN U5UNW eaBa
/ BH NI -5aBU32HW SH5ea / BH NI WBX3a 5eU3-Ne-pa
U 123-5UNWBa/-B UN 5ea -11BHl BU5aNa WWHX3aB5-UN2-N W WON
W3e -Ba-W -WI HNI U5 W UNW Ue 2B-2-/ aNBlaWU5 -W
Ia5aB UNaI 5e-5- 2-N W 3HNX353H 2 HB3 BUX5 53 -5aB
2apa2W-5HNa HB HBa UN a a2WON5ea BaWBa HNa UNBa-WI
-N-paB/a HX H5a 5e-N Xa5I BN -Ba1a5UNHX5ea a-B
-W 1aBHI e I BHI eaN3H 1-BaI SH5 53 -5aB2apa2W NaB
H BH353HN U5UNW -WI HN H a2BaW25WU5UaV5U -5aI 5e-5
5 53 / BH NI -5aB2apa2W-5UN a a2W2B-5aI UN5ea BaWBa
HNa H 2 N5BYW HN-paB/a HpaB5ea a-BXB3-W1aBHI
H5a 5e-N Xa5 eaN3H 1-BaI -/-UN5 H BH353HN U5UNW
NaB-N HX5ea BH35WaN-BHW

MNI UN WESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN4X35W
-WBU5aI U5ea UN5 2-N W-N X5 Ba W HX1BH1aB UW2aWW
5e-NWUNX3-N5

BHa353HN5B 35UN-N H1aB 5UN3H 2 a UN3HNW5aN5 U5e 4-N
aBN-B UNH H N5 1H23aW2-5aI 5H -UN5-UN5 -5aB 5U5aW BN
WUW U3 apaN5W

- HaNU2T 1-35 ea BHa353H 2 a UN3HNW5aN5 U5e 4-N
aBN-B UNH H N5 1H23aW2-5aI 5H -UN5-UN5 -5aB 5U5aW
I BN WUW U3 apaN5W ea 1HaNU2U 1-35W5X5ea BHa35HN4-N
aBN-B UNH H N5 1H23aW2-5aI 5H -UN5-UN5 -5aB 5U5aW
I BN WUW U3 apaN5W Ba I U5 W5I UN5ea B X5STR -51-/a

T 1-35 BHB5H U5-5UN HaNU2 WUNX3-N5

3 U5-5UN a-WBa ea BHa35 U2UN3H1HB 5a U5-5UN
a-WBa S eU5e Ba UBW5ea UN5 2-5UNHX- -5aB
XH W 5HXp-2pa -55ea 2 N a H2TN5 a 4B 35 Ba XB5ea
1 BH W HX5aB UN-5UN XH X2H UN - 2-B a a-B5e - a UN5ea
pUN5 HX5ea W5a

I MNI UN W, I H1 5UNHX S H 2 - a 5ea BHa35
3HNW5aN5 U5e 5ea 4-N aBN-B UNH H N5 /H 2WBa/-B UN 5ea
UN5 2-5UNHX3 5HXI apUaWHN 5U5 2NaW eUB3HNW5aN5
U5e 5ea H N5 W2-NBaI 3aW5ea 2pa2HX5eWU 1-35 a2H 5ea
WUNX3-N55eBaWHI

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN4-N aBN-B UNH
H N5 1H23aW2-5aI 5H -UN5-UN5 -5aB 5U5aW BN
WUW U3 apaN5WU2aW5e-NWUNX3-N5

F. Agricultural Resources

BHa35 HN5B 35UN

- 4-N5, N RUpaB HN5B 35UN, Ba-

, HN5B 35UNHX5ea aW5aBN H51HBUNHX e-W THX5ea 2 N a
H2 Ua2Na H 2 BaW5UN5ea 5a 1HB B 3HNpaBWNHX-11BH U -5a2
-3BaWXT 1HB N5MB 2-N SHNN- /B3 2 B 2 W

- HaNU2T 1-35 ea BHa353H 2 BaW5UN5ea 5a 1HB B
3HNpaBWNHX-11BH U -5a2 -3BaWXXB 2-N SHNN
-/B3 2 B 2 W ea 1HaNU2U 1-35W5X5ea BHa35HN5ea
3HNpaBWNHXU 1HB N5XB 2-N SHNN- /B3 2 B 2 W -Ba
I U5 W5I UN5ea B X5STR -51-/aW -N

MNI UN W5TR XB4-N5, N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

T 1-35 BUBSH USU-SUN aW5e-NW/NX3-N5

3 USU-SUN a-WB H USU-SUNUBa UBa XB5eUMH5aNU2
U 1-35 a3- W 5ea U 1-35UB3HNWUBaBa 2aW5e-NW/NX3-N5

I MNUV W HNSB 3SUNHX5ea aW5aBN HNS1HSUNHX e-W THX
5ea 2 Na H2 Ua20Na H 2 BaW25UN5ea 5a 1HBB 3HNpaBWN
HX-11BU -5a2 -3BaWXT 1H5-N5MB 2-N SHNN
-/B3 25 B2 W 5ea aW5aBN HNS1HSUNHX e-W THX5ea 2 Na
H2 Ua20Na H 2 a 2B-5aI HNSB 2-N HX45-5a Ua
T 1H5-N5a , 11BU -5a2 -3BaW3H 1BWI HX5ea aW5aBN
1HSUNHX e-W THX5ea 2 Na H2 Ua20Na - Xa5 Ua
3HBUHB UaW2HN HXMB 2-N HX45-5a Ua T 1H5-N5a
H 2 a 5a 1HBB 2 3HNpaBaI SHNN-/B3 25 B2 WI BN
3HNSB 3SUNHX5ea 1Ua20Na H apaB 3HNSB 3SUN H 2 a
3H 12a5aI UeUN- HNS 1aBWI 5ea BHa351Ua20NaW H 2
a UNW 2aI NaB BH N -N 1Ba a UNW WUW-N WBX3a
3HN USUNW H 2 a BaW5BaI 1HN3H 12a5UNHX3HNSB 3SUN
-35pUaW M2H UN 3HNSB 3SUN 5ea -/B3 25 B22-N H 2 a
Ba5 BaI SH1Ba 3HNSB 3SUN3HN USUN-N XB UN HlaB 3UNW
3H 2 BaW a eW5a 1HBB U 1-35U2aW5e-NW/NX3-N5

a HNS2 WUN ea 1H5aNU2U 1-35HX5ea BHa35Ba2-5aI SH
3HNpaBWNHXT 1H5-N5MB 2-N SHNN-/B3 25 B2 W5W2aW
5e-NW/NX3-N5

G. Air Quality

BHa35 HNSB 3SUN

- 4apaN - W - -N RaW5pHUB 4-N5 , N RpaB apU -N HN -N 5a
Ba HNSB 3SUN, Ba-W

, S UWNWXH 3HNSB 3SUN-35pUaW3H 2 a 3aaI - 3B5aBU
1H2 5-N5- UaN5-UB -25 W-N-B XB -N
W W5NU2 3HNSBU 5a SH-Na UNW HB1BHa35aI -UB -25 W-N-B
pU2-SUN HBa 1HW WNW5pa Ba3aI SHBWHW W5NU21H2 5-N5
3HN5aNSB 3UNW

- H5aNU2T 1-35 ea BHa35 W3HNSB 3SUN-35pUaW3H 2 BaW25
UN5ea a 3aaI aN5a HX- 3B5aBU 1H2 5-N5- UaN5-UB -25
W-N-B XB -N W W5NU2 3HNSBU 5a
SH-Na UNW HB1BHa35aI -UB -25 W-N-B pU2-SUN HBa 1HW
WNW5pa Ba3aI SHBWHW W5NU21H2 5-N53HN5aNSB 3UNW ea
1H5aNU2U 1-35W5HX5ea BHa35HN-UB -25 -Ba IUW WI UN5ea
B XSTR -51-/aW -N -N UN5ea MN-2STR -51-/a

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

T 1-35 BUBSH USU-SUN aW5e-NWUNX3-N5

3 USU-SUN a-WB H USU-SUNUBA UBI XB5eUMH5aNU2
U 1-35 a3- W a UWWHXXH 5eaW 1H2 5-N5W H 2 1BaW5-N
-IpaBW 52aW5e-NWUNX3-N5U 1-35

I MNUVWS UWWHXXH 3HN5B 35UN-35pU5aW H 2 N5a 3aaI
- 3B5aBJ 1H2 5-N5- laN5-UB -25 W5-N-B XB
-N W W5-N5U2 3HN5B 5a 5H-Na U5UN HB1BHa35aI -UB
-25 W5-N-B pU52-SUN HBa 1HW WNW5pa Ba3a15HBW
W W5-N5U21H2 5-N53HN5aNB 5UNW S UWWHXXH5eaW 1H2 5-N5W
1BaW5-N-IpaBW 52aW5e-NWUNX3-N5U 1-35 HN5B 35UNHX
BHa35 Ba2-5aI 3HN5a -NBa X3U5aW H 2 1BI 3a H5e
3H W5pa a UWWHNR -N R -N
X/U5pa I W5a UWWHNV a 5H5ea H Ua N-5 Ba HX HW
1BIHWI 3HN5B 35UNa UWWHNI BaW-N 5ea W5H5I B 5UNHX
1BIHWI 3HN5B 35UN-35pU5aW BHa353HN5B 35UN3H W5UN
a UWWHNV H 2 N51BI 3a W W5-N5U2U 1-35WUN- / U5aN
2B-5UN eaBaXB 3H W5pa a UWWHXXH BHa35
3HN5B 35UNa U aN5 H 2 N5a 3aaI -N -UB -25 W5-N-B
HB3HN5B 5a W W5-N5U2 5H-Na U5UN HB1BHa35aI -UB -25
W5-N-B HB3HN5B 5a W W5-N5U2 5H-Na U5UN 1B1BHa35aI -UB
W5-N-B pU52-SUN a3- W 5ea BHa35 H 2 Na3aW5B2 3H 12
U5e 4 , R 2a X/U5pa I W5a UWWHNV H 2 a
3HN5B2aI -N a UWWHNI BN 3HN5B 35UN H 2 a
UNU -2H 5W5a 5ea 3HN5B 35UN-Ba-W-N H 2 N5pU52-5a -N
-UB -25 W5-N-B HB3HN5B 5a W W5-N5U2 5H-Na U5UN HB
1BHa35aI -UB -25 W5-N-B pU52-SUN BHa353HN5B 35UN
a UWWHNV H 2 BaW5UN-IpaBW 52aW5e-NWUNX3-N5U 1-35W
5H- laN5-UB -25 W5-N-B W-N WNW5pa Ba3a15HBW
NUg aW5aBNe-pa a2U UN-5aI XH 5ea BHa355ea Ba2B-5UNHX-
Ua W35UNHX5ea 4 S -33aW5H-I -UB -25 U 1-35W5H
5eU5a2a aN5I W5 W5I UN5ea B X5STR U25eaBaXB NH2N aB
HB3 B ea a2U UN-5UNHX5ea 1W5a- Ba2B-5UNHX5ea 4 S
-33aW5H-I -W BHa35a2a aN5 H 2 2aW5N 5N5-pHU T 1-35
,

a HN2 W5IN ea 1H5aNU2U 1-35HX5ea BHa35Ba2-5aI 5H3B5aBJ
1H2 5-N5- laN5-UB -25 W5-N-B W5W2aW5e-NWUNX3-N5

, S UWWHXXH 3HN5B 35UN-35pU5aW H 2 a 3aaI I-U
-N 3-2aN-B -BaB4 , a UWWHNVUNX3-NBa 5eBaWHI W5B

- H5aNU2T 1-35 ea BHa353H 2 BaW5UNa 3aaI aNBaWHX
4 , a UWWHNVUNX3-NBa 5eBaWHI W5B ea
1H5aNU2U 1-35WHX5ea BHa35HN-UB -25 XB a UWWHNV

MNUV WESTR XB4-N5 , N R U5paBg -5aBRUe5, 1123-5UNW
-Be

-Ba IUV WAI UN5ea BXS TR -51-/a -N UN5ea MN2STR
-51-/a

T 1-35 BHBSH UJ-SUN HANU2 WNU3-N5

3 UJ-SUN a-WBa ea BHa35 U2UN8HB 5a UJ-SUN
a-WBaW , -N , IaWBUaI UN4a35UN
HX5ea BXS TR eUe U2Ba Ua NUg aWaBN5HaNBH B/a
3HNSB35BWH Wa 2WkaI IlaW2Xa2UN3HNSB 35UNa U aN5
eaBa Xa-W2a -N 5HaNBH B/a 3HNSB35BWH W 5ea Na aW
IlaW21H aBaI a U aN5-p-U 2a W HX5eUW 2aBN 5pa IlaW2
Xa2 H 2 BaI 3a a UWHNW laBaN5 BaWa35pa2
XH 3HpaN5UN-2IlaW2

I MNUVW ea W HXa 2WkaI IlaW2Xa2UN-21BH HWI
3HNSB 35UNa U aN5 H 2 W W-N5U2 BaI 3a - U I-U
a UWHNW-HX-2HX5ea 1H2 5-N5WNB2 IUV a UWHNW
XH 3HNSB 35UN U2 a BaI 3aI 5H- 2apa2 aH 5ea 5eBaWHI HX
WNU3-NBa

a HN2 WJN ea 1HANU2U 1-35HX5ea BHa35HN a UWHNW
U2aW5e-NWNU3-N5

, HNSB 35UNHX5ea 3Hpa -NBa X3U5aW H 2 a 1HW 5ea
1 23 SHWI a 3HNaNSB 5UNWHXSH U -UB3HN5 UN5W , W

- HANU2T 1-35 ea BHa35H 2 a 1HW 5ea 1 23 SHWI a
3HNaNSB 5UNWHX , W ea 1HANU2U 1-35WHX5ea BHa35HN
1HANU2a 1HWBa HXWI a 3HNaNSB 5UNWHX , 5H5ea 1 23 -Ba
IUV WAI UN5ea BXS TR -51-/aW -N

T 1-35 BHBSH UJ-SUN aW5e-NWNU3-N5

3 UJ-SUN a-WBa H UJ-SUNUBa UBaI XBa5eUM HANU2
U 1-35 a3- W BHa353HNSB 35UNa UWHNW-HX , W H 2
1BH 3a 2aW5e-NWNU3-N5U 1-35WH1 23 ea-2e

I MNUVW HNSB 35UNHX5ea 3Hpa -NBa X3U5aW H 2 a 1HW
5ea 1 23 SHWI a 3HNaNSB 5UNWHX , WUN5ea XBa HX
1-B3 2-5a a UWHNW-XH IlaW21H aBaI HN -N HXBH-I
a U aN5 H apaB 5ea , Wa U5aI XH 5eUWa U aN5
H 2 N51BH 3a W W-N5U2ea-2e U 1-35W-5- /paN2B-5UN
I a 5H5ea H Ua N-5 Ba HX5ea WI BaW-N 5ea WH5I B 5UNHX
1BH HWI 3HNSB 35UN-35pU5aW

a HN2 WJN ea 1HANU2U 1-35HX5ea BHa35HNa 1HWBa HX5ea
1 23 SH , WU2aW5e-NWNU3-N5

MNUVW ESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

H. Cultural and Paleontological Resources

BHa35 HNSB 35UN

- 4apaN - W - -N RaWpHUB HNSB 35UN, Ba-

R HNSB 35UNHX5ea Ba-2UNaI 1Wba- -33aWBFH I H 2 3- W-
2aW5e-NWUNX3-N5-IpaB 3e-N a UN5ea WUNX3-NBa HX5ea HlaB SHB
eH W 3H 12a -WBU5aI Ue 4, R

- HaN5U2T 1-35 ea BHa353H 2 BaW25UN-N-IpaB 3e-N a UN
5ea WUNX3-NBa HX5ea HlaB SHBeH W 3H 12a -WBU5aI Ue
4, R ea 1HaN5U2U 1-35HX5ea BHa35HN5ea WUNX3-NBa HX
5ea laB 5UN H W 3H 12a , WBU5aI Ue 4, R -Ba
I U W W I UN5ea B X S T R -51-/aW -N

T 1-35 BHB3H U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UB I XB5eUM HaN5U2
U 1-35 a3- W 5ea 4, R HlaB SHBeH W W5a -W a5aB UNaI SH
a N5 WUNX3-N5-N UNa2U2a XB2USUN HN5ea -5UN-2
Ra/ U5aB

I MN UN W ea 1BH H W I -2UN aN5HX5ea -33aWBFH 3BHW W
5eH /e 5ea -11aI 2B-5UNHX5ea HlaB SHBeH W 3H 12a
-WBU5aI Ue 4, R T5UM HWU2a 5e-5W a HX5ea eU5HB3
Xa-5 BaWN5ea N5eaBN1HBUNHX5ea W5a - a U 1-35aI I BN
3HNSB 35UN H apaB -WN5aI - Hpa 5ea 4, R HlaB SHB
eH W W5a -W a5aB UNaI SH a N5 WUNX3-N5-N UNa2U2a XB
2USUN HN5ea -5UN-2Ra/ U5aB 4 3HN3 BaI Ue 5eUW
Ia5aB UN-5UN eaBaXBa U 1-35W5HeU5HB3 BaW BaW WBU5aI
Ue 5eUW5a H 2 a 2aW5e-NWUNX3-N5

a HN2 WUN ea 1HaN5U2U 1-35HX5ea BHa35HN5ea
WUNX3-NBa HX5ea HlaB SHBeH W 3H 12a -WBU5aI Ue 4, R
U2aW5e-NWUNX3-N5

R aVB 35UNHX-N N-N53U-5aI 3 25 B2HB1-2aHNSH U-2
BaW Ba a3- W HX3HNSB 35UN-35pU5aW H 2 3- W - W W-N5U2
-IpaB 3e-N a UN5ea WUNX3-NBa HX5ea BaW Ba 1 BW-N5SHW35UN
HX S ,

- HaN5U2T 1-35 ea BHa353H 2 BaW25UN5ea I aVB 35UNHX
N-N53U-5aI 3 25 B2HB1-2aHNSH U-2BaW BaW ea 1HaN5U2
U 1-35HX5ea BHa35HN N-N53U-5aI 3 25 B2HB1-2aHNSH U-2
BaW BaW-Ba I U W W I UN5ea B X S T R -51-/a

T 1-35 BHB3H U-5UN HaN5U2 WUNX3-N5

MN UN WE STR XB4-N5 , N R(paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3 UJ-SUN a-Wa ea BH35 UUNBHHB 5a UJ-SUN
 a-WaW R UN4a3SUN HX5a B XSTR eUe
 UaNBa 5e-5 1HN5a IUSHpaB HX-N NNS3U-5aI
 -Be-aHH U-2HB1-2HNSHH U-2BaW Ba IUSHpaB I BN
 3HNSB 3SUN -2/ BH NI IUS B-NBaW UeUN Xa5HX5a
 IUSHpaB U a e-2aI HBBaI Ua35aI 5H5eaB- Ba-W HNSB 3SUN
 UN5BaW a NS25ea IUSHpaB e-W aaNIHB aNaI -
 -2XaI -Be-aHH USHB1-2HNSHH US -NI USMHANU2
 WUNX3-NBa ap-2 -5aI 3HNW5a5 Ue S , RaW BaW
 3HNW5aI WUNX3-N5 U a -pHual BH35BaIaWUN TX
 -pHU-NBa UN5Xa-WUa 5ea BaW Ba U a W a35SH- I-5
 Ba3HpaB UJ-SUN1BH B -W11BHBJ5a TXe -NBa -UNW Ba
 IUSHpaBaI 5ea 4-N aBNBUNH HN5 3HBNaB U a 3HN5-35aI
 -N -21B BaI BaW BaI 5ea -2XBNJ a-2e -N 4-X5
 Ha S , Ua2NaW a -N 23
 RaW BaW Ha U a XZH al

I MNUNW 4Ua Ba3HB W-N 25aB 5 Ba -55ea 4-N aBNBUNH
 , BeahHH U-2TXB -SUN aNaB-55ea 4-N aBNBUNH HN5
 W aBa W-BaI 5HUaNUX -2Ba3HB al 3 25 B2BaW BaW
 -N 1BpUH WUpaWU-SUNW UeUN- Ua 3HBUHB5e-53HN5-UNW
 5ea Na UN5 a BH I XB5ea 4apaN - W - -N 5ea Ba BH SUN HX
 5ea BH I 1BpUUN -33aW 1V5a- HX5ea I- T5UeUe2
 NUa2 5e-5-N NNS3U-5aI 3 25 B2HB1-2HNSHH U-2BaW Ba
 - a aNBH NaBaI I BN 3HNSB 3SUN H apaB 1HNW3e
 IUSHpaB 5ea U 12a aN5-SUNHX R BaI 3aW5ea U 1-35SH
 - 2apa2HX2aW5e-NWUNX3-N5 , N Ba -UNW U 1-35W U a 2aW
 5e-NWUNX3-N5

a HN2 WUN ea 1H5aNU2U 1-35HX5a BH35 NNS3U-5aI
 3 25 B2HB1-2HNSHH U-2BaW BaWUaW5e-NWUNX3-N5

4-N5 , N RUpaB HNSB 3SUN, Ba-

R aVB 3SUNHX-N NNS3U-5aI 3 25 B2HB1-2HNSHH U-2
 BaW Ba a3- W HX3HNSB 3SUN-35pUaW H 2 3- W - W VNSU2
 -IpaBa 3e-N a UN5ea WUNX3-NBa HX5ea BaW Ba 1 BW-N5SH4a3SUN
 HX S ,

- H5aNU2T 1-35 ea BH353H 2 BaW5UN5ea I aVB 3SUNHX-N
 NNS3U-5aI 3 25 B2HB1-2HNSHH U-2BaW Ba -N -N-IpaBa
 3e-N a UN5ea WUNX3-NBa HX5ea BaW Ba ea 1H5aNU2U 1-35W
 HX5ea BH35HN NNS3U-5aI 3 25 B2HB1-2HNSHH U-2
 BaW BaW Ba IUS WAI UN5ea B XSTR -51-/a

T 1-35 BHBSH UJ-SUN H5aNU2 WUNX3-N5

3 UJ-5UN a-WB ea BH35 U2UN8HB5a UJ-5UN
 a-WB W R UN4a35UN HX5ea BXSSTR eUe
 U2aNBW5e-5 1HN5ea IUSHpaB HX-N NNS3U-5aI
 -Be-aH2H U-2HB1-2HNS2H U-2BWI Ba IUSHpaB I BN
 3HNSB 35UN -2/ BH N IUS B-NBaW UeUN Xa5HX5ea
 IUSHpaB U2 a e-2aI HBBaI Ua35aI 5H5eaB-Ba-W HNSB 35UN
 U2N5BaW a NS25ea IUSHpaB e-W aaNIHB aN5aI -
 -2XaI -Be-aH2H USHB1-2HNS2H US -N USMHAN5U2
 WUNX3-NBa ap-2 -5aI 3HNW5a5 Ue S , RaWI BaW
 3HNW5aI WUNX3-N5 U2 a -pHUaI BH35BaI aWUN TX
 -pHU-NBa UN5Xa-W2a 5ea BaWI Ba U2 a W a35SH- I-5
 Ba3HpaB UJ-5UN1BH B -W11BHBJ5a TXe -NBa -UNW-Ba
 IUSHpaBaI 5ea 4-N aBN-BUH H N5 3HBNaB U2 a 3HN5-35aI
 -N -21B-BaI BaWBa UaI -2XBNJ a-2e -N 4-Xa5 HI a
 S , Ua2UNaW a -N 23 RaWI BaW
 Ha U2 a X2H aI

I MN UN W 4Ua Ba3HB W-N 25aB 5 Ba -55ea 4-N aBN-BUH
 , Beah2H U-2TXB -5UN aN5aB-55ea 4-N aBN-BUH H N5
 W aBa W-BaI 5HUaNSX -2Ba3HB aI 3 25 B2BWI BaW
 -N 1BapUH WUNpaWU-5UNWUN5ea Ba2ap-N5 3HNSB 35UN-Ba-W T5UW
 eUe2 NUa2 5e-5-N NNS3U-5aI 3 25 B2HB1-2HNS2H U-2
 BaWI Ba - a aNBH NaBaI I BN 3HNSB 35UN H apaB 1HN
 W3e IUSHpaB 5ea U 12a aN5-5UNHX R BaI 3aW5ea
 U 1-35SH- 2apa2HX2aW5e-NWUNX3-N5 , N Ba -UNW U 1-35W
 U2 a 2aW5e-NWUNX3-N5

a HN2 WUN ea 1H5aNSU2U 1-35HX5ea BH35 NNS3U-5aI
 3 25 B2HB1-2HNS2H U-2BWI BaWU2aW5e-NWUNX3-N5

R HNSB 35UNHX5ea 2 Na H2 Ua2UNa H 2 3- W - W 5NSU2
 -IpaB 3e-N a UNWUNX3-NBa HX5ea H5e MHB -N2 - 1H5aNSU2
 WUNX3-N5eUSHB3-2BWI Ba

- H5aNSU2T 1-35 ea BH353H 2 BaW25UN-N-IpaB 3e-N a UN
 WUNX3-NBa HX5ea H5e MHB -N2 - 1H5aNSU2 WUNX3-N5
 eUSHB3-2BWI Ba ea 1H5aNSU2U 1-35WX5ea BH35HN5ea
 H5e MHB -N2-Ba IUS WAI UN5ea BXSSTR -51-/aW
 -N

T 1-35 BUBSH UJ-5UN H5aNSU2 WUNX3-N5

3 UJ-5UN a-WB ea BH35 U2UN8HB5a UJ-5UN
 a-WB R UN4a35UN HX5ea BXSSTR eUe
 U2aNBW5e-51BUBSH3HNSB 35UN-35U5aW-2HN 5ea W/ aN5
 HX5ea 2 Na H2 Ua2UNa e-W T-2UNaI NH5e HX BaNWH5
 RH-I 5ea 2B-5UNHX5ea H5e MHB -N2 U2 a 1Ba3UW2

MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
 -Be

Tg S4 SR S T T -/a

-11aI HNaV UaaBV IaW/N12-NW/HU/aN5X eaBa sea 3-N2
X2W UeUN sea 3HNB 35UN3HBUHB a 1HB B XNBUN U2 a
12-3aI Xaa5WI se HX sea 3-N2-2N sea 1HBUHX sea 3-N25e-5
X2W UeUN sea 3HNB 35UN3HBUHBSH1BpUa - W-22 XaB-Ba-
-N ea-p 3HNB 35UNa U aN5HBpaeU2aW U2N5 a-2H aI
NHe HX sea XNBUN

I MNUV W, H 5 Xaa5HX sea HHe MB -N2 H 2 X2
UeUN sea 3HNB 35UN3HBUHBHX sea 2 Na H2 Ua2Na e-W
T eaN sea 1BH HMI 1Ua2Na a 5aN WseBH / e sea HB Na / BpaW
NHe HX BaNWH5RH-I eUW3-N2W/ aN5 eUe H 2 a
2B-5aI -5 sea NHeaBNaI/a HX sea XaB HNa HX sea 3HNB 35UN
3HBUHB 3HNW5WHX-NaN2HMI 3-N2Na-B sea / BH N WBX3a
ea 3-N2 H 2 N5 a IUB32 U 1-35aI 5aNBeUW -35pUaW
sea-p a U aN53H 2 a I BpaNHpaB sea 3-N2 eUe 3H 2
3- W WI a HX sea 3-N2W Wa SH3H2-1W NaB sea aUe5
a 1HB B XNBUN NaB R -BH N sea -Ba eaBa sea
3-N2X2W UeUN sea 3HNB 35UN3HBUHB U21BpaN5ea-p
3HNB 35UNa U aN5HBpaeU2aW XH 3- W W sea 3-N2W Wa
SH3H2-1W , N Ba -UNU U 1-35 U2 a 2aW se-NW/NX3-N5

a HN2 W/N ea 1HaNU2U 1-35HX sea BHa35HN sea HHe MB
-N2-Ba 2aW se-NW/NX3-N5

R HNB 35UNHX sea 2 Na H2 Ua2Na e-W/T H 2 3- W
2aW se-NW/NX3-N5-IpaB 3e-N a UN sea W/NX3-NBa HX sea Bpa
H W g a2W a

- HaN5U2T 1-35 ea BHa353H 2 BaW25UN-N-IpaB 3e-N a UN
W/NX3-NBa HX sea Bpa H W g a2W a ea 1HaNU2U 1-35W
HX sea BHa35HN sea Bpa H W g a2W a -Ba I U W WI UN sea
B XSTR -51-/a

T 1-35 BHBH U/5UN aW se-NW/NX3-N5

3 U/5UN a-WBa H U/5UNUBa UB I XB seUM HaNU2
U 1-35 a3- W U 1-35W He U/H3 Ba WI BaW WBU5aI Ue seUW
Wa H 2 a 2aW se-NW/NX3-N5

I MNUV W ea e-W/T 3HNB 35UNHX sea 2 Na H2 Ua2Na
H 2 3- W - 2aW se-NW/NX3-N5-IpaB 3e-N a UN sea
W/NX3-NBa HX Bpa H W g a2W a ea Bpa H W g a2
W a UW B-5aI -11BH U -5a2 Xaa5WI se HX sea 1BH HMI
1Ua2Na -2/N aN5 -N UeUN sea XaB HNa HX sea 1BH HMI
3HNB 35UN3HBUHB T5UM HMU2a se-5WI a HX sea eU/H3
Xa-5 BaWN sea NHeaBN 1HBUHX sea Wa W3e -W sea N HB-BaI
3H 2a H 2 aB1-IW - a U 1-35aI I BV 3HNB 35UN

MNUV W STR XB4-N5 , N R/paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

H apaB 5ea Bpa H W g a2W5a - Wa5aB UNaI SH a N5
W/NX3-N5-N UNa2/U2a XB2UWU HN5ea -5UN-2Ra/ U5aB ea
45-5a U5HB3 BaWp-5UN XX3aB 4 3HN3 BaI U5e 5eUW
Ia5aB UN-5UN eaBaXBa U 1-35WHeU5HB3 BaWI BaW WBU5aI
U5e 5eUW5a H 2 a 2aW5e-NW/NX3-N5

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HN5ea
W/NX3-N5a HX5ea Bpa H W g a2W5a U2aW5e-NW/NX3-N5

R HN5B 35UNHX5ea 2 Na HF2 Ua2UNa e-W/TIT H 2 3- W-
2aW5e-NW/NX3-N5-IpaBW 3e-N a UN5ea eU5HB3-2UN5a/ B5 HX5ea H5e
MB -N-2 - 1HaNU2 W/NX3-N5eU5HB3-2BaWI Ba - WaXNaI UN
4a35UN HX S ,

- HaNU2T 1-35 ea BHa35H 2 BaW25UN-N-IpaBW 3e-N a UN
5ea eU5HB3 UN5a/ B5 HX5ea H5e MB -N-2 ea 1HaNU2
U 1-35WHX5ea BHa35HN5ea eU5HB3 UN5a/ B5 HX5ea H5e MB
-N-2-BaI U5W WAI UN5ea BXSSTR -51-/aW -N

T 1-35 BHBSH UU-5UN aW5e-NW/NX3-N5

3 UU-5UN a-WBa H UU-5UNUBa UaI XB5eUMHaNU2
U 1-35 a3- W e-W/TIT3HN5B 35UNHX5ea 2 Na HF2 Ua2UNa
H 2 e-pa - UNU -2U 1-35HN5ea eU5HB3 UN5a/ B5 HX5ea H5e
MB -N-2

I MNI UN W ea e-W/TIT3HN5B 35UNHX5ea 2 Na HF2 Ua2UNa
H 2 3- W-N-IpaBW 3e-N a UN5ea eU5HB3 UN5a/ B5 HX5ea
H5e MB -N-2 - 1HaNU2 W/NX3-N5eU5HB3-2BaWI Ba - W
IaXNaI UN S , 4a35UN TX1BH1HAI 3HN5B 35UN
-IpaBW2 U 1-35W5ea 1e W3-2Xa-5 BaW5e-53HNpa 5ea 3-N-2 W
eU5HB3 W/NX3-N5a U5 H 2 a - W/NX3-N5U 1-35 ea
1BH1HAI 1Ua2UNa H 2 3BHWI Ua352 NaB5ea RUpaB BHWU
Ua2UNa HNa W35UN-WBU5aI U5e 5ea H5e MB -N-2 -
Bpa5aI a5-21Ua 5e-5IUpaBW -5aBXH 5ea -XaB- HX5ea 4, R
1H aB5H W ea 1BH1HAI 2 Na HF2 Ua2UNa H 2 3BHW
NaB5ea a U5UN a5-21Ua BH UN 5eBH /e 5ea Ba3aNX2
-5aB/2 eU53HN5B 35UN a5eHI H 2 e-pa NHU 1-35HN5ea
eU5HB3 UN5a/ B5 HX5ea H5e MB -N-2 TX5eU53HN5B 35UN
a5eHI UN5e51HWU2a U5 - a Na3aW5B 5HBa Hpa 1-B5HX5ea
a U5UN a5-21UaI BN UN5-2-5UNHX5ea Na 1Ua2UNa ,
W35UNHX5ea a5-21Ua H 2 a Ba HpaI 5a 1HB B2 -N
Ba12-3aI UN UN -XaBUN5-2-5UNHX5ea Na 1Ua2UNa eUW
3HN5B 35UN a5eHI H 2 -2Me-pa - UNU -2U 1-35HN5ea
eU5HB3 UN5a/ B5 HX5ea H5e MB -N-2-N H 2 BaW25UN- 2aW
5e-NW/NX3-N5U 1-35HN3 25 B2BaWI BaW

MNI UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a HN2 WJN ea 1HfANU2U 1-35HX5ea BHa35HN5ea eU~~SH~~B3-2
UN5a/ B5 HX5ea H5e MB -N-2UW2aW5e-NW/NX3-N5

R HNB 35UNHX5ea HSHN -N HN HNa35BIT Ua2Na H 2
3- W - 2aW5e-NW/NX3-N5-IpaB 3e-N a UN5ea eU~~SH~~B3 UN5a/ B5 HX5ea
RaI 2N W -N-2 - 1HfANU2 W/NX3-N5eU~~SH~~B3-2BaWI Ba - W aXNaI UN
W35UN HX S ,

- HfANU2T 1-35 ea BHa353H 2 BaW25UN-N-IpaB 3e-N a UN
5ea eU~~SH~~B3 UN5a/ B5 HX5ea RaI 2N W -N-2 ea 1HfANU2U 1-35W
HX5ea BHa35HN5ea eU~~SH~~B3 UN5a/ B5 HX5ea RaI 2N W -N-2-Ba
I W W aI UN5ea B XSTR -51-/a

T 1-35 BUBSH UJ-SUN aW5e-NW/NX3-N5

3 UJ-SUN a-WBa H UJ-SUNUBa UBaI XB5eUMHfANU2
U 1-35 a3- W 5ea 3HNB 35UNHX5ea HSHN -N HN HNa35BIT
TT Ua2Na H 2 e-pa - UN -2U 1-35HN5ea eU~~SH~~B3 UN5a/ B5
HX5ea RaI 2N W -N-2-N H 2 BaW25UN- 2aW5e-NW/NX3-N5
U 1-35HN3 25 B2BaWI BaW

I MN UN W ea 3HNB 35UNHX5ea HSHN -N HN HNa35BIT
Ua2Na H 2 3- W - 2aW5e-NW/NX3-N5-IpaB 3e-N a UN5ea
eU~~SH~~B3 UN5a/ B5 HX5ea RaI 2N W -N-2 - 1HfANU2 W/NX3-N5
BaWI Ba - W aXNaI UN S , 4a35UN TXIHIHMI
3HNB 35UN-IpaB 2 U 1-35W5ea 1e W3-2X-5 BaW5e-53HNpa
5ea 3-N-2 WeU~~SH~~B3 W/NX3-NBa U H 2 a - W/NX3-N5U 1-35
ea 1BHIHMI 1Ua2Na -2UN aN5 H 2 BN1-B2a25H5ea
RaI 2N W -N-2XB H5HX5WBH 5a -N H 2 3BHW N aB5ea
3-N-2UNHNa 12-3a ea Na 1Ua2Na H 2 3BHW5ea 3-N-2Na-B
5ea ea-I HX HSHN -N HN eaBa 5ea 3-N-2UBH 1HMI HX-
3HNB5a 1Ua ea 3HNB5a 1Ua H 2 a W11H5aI UN12-3a -N
a15UNWpUa I BV 3HNB 35UN eU~~SH~~B3 35UN a5eHI
H 2 e-pa - UN -2U 1-35HN5ea eU~~SH~~B3 UN5a/ B5 HX5ea
RaI 2N W -N-2-N H 2 BaW25UN- 2aW5e-NW/NX3-N5U 1-35
HN3 25 B2BaWI BaW

a HN2 WJN ea 1HfANU2U 1-35HX5ea BHa35HN5ea eU~~SH~~B3-2
UN5a/ B5 HX5ea RaI 2N W -N-2UW2aW5e-NW/NX3-N5

R HNB 35UNHX5ea HSHN -N HN HNa35BIT Ua2Na H 2
3- W - W W5U2-IpaB 3e-N a UN5ea W/NX3-NBa HX5ea BaNWH5
BU/a - W/NX3-N5eU~~SH~~B3-2BaWI Ba UX5ea 1Ua2Na UWNV 2aI 5eHI /e
5ea H2a UN5ea g -22 -5 BaNWH5 BU/a

- HfANU2T 1-35 ea BHa353H 2 3- W -N-IpaB 3e-N a UN5ea
W/NX3-NBa HX5ea BaNWH5 BU/a - W/NX3-N5eU~~SH~~B3-2

MN UN WESTR XB4-N5 , N R(paBg -5aBRU/e5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

BaWi Ba ea 1HaNu2U 1-35HXSea Ba35HN BaNWH5
BU/a -Ba IUW WI UNSea BXSTR -51-/aW -N

T 1-35 BHBSH UU-5UN aWSe-NWNU3-N5

3 UU-5UN a-WBa ea Ba35 UNBHEHB 5a UU-5UN
a-WBa R UN4a35UN HXSea BXSTR eUe
U2aNWBa 5e-51BHBSH3HN5B 35UN - -2Xai -BeUa35 B2
eUWHEUN U2Bpld Sea XN-23HN5B 35UNI aWNUHXSea HSHN
-N HN HNa35BTT Ua2Na SHpaBX -pHU-NBa HXWNU3-N5
U 1-35WH BaNWH5 BU/a Xa-5 BaW TXU UNa3aWVB SHUNW 22
Sea HSHN -N HN HNa35BTT Ua2Na 5eBH/e Sea H2a UNSea
g -22 UeUN BaNWH5 BU/a WBa5-UNW -22 3HN5B 35UN
-35pUaW U2 a 3HN5BaI SH1BpUH W IUW BaI W35UNW-N Sea
-22 U2 a BaWHEI SH1Ba Ba353HN UNW

I MNUW BaNWH5 BU/a UW WNU3-N5eUWHEB3-2BaWi Ba -W
IaXNaI UN S , W35UN HN5B 35UNHXSea HSHN
-N HN HNa35BTT Ua2Na H 2 3- W -N-IpaBW 3e-N a UXU
UWUNW 2aI 5eBH/e Sea H2a UNSea g -22 -5 BaNWH5 BU/a
HSea a 5aN5UWHWU2a Sea HSHN -N HN HNa35BTT
1Ua2Na H 2 a UNW 2aI NaBSea 1WBa- W35UNHXSea
Ba5-UNW -22HXSea BaNWH5 BU/a 2a-pUW Sea -22U5-35 -N
H 2 -pHU WUW Sea H2a UNSea g -22 TXU UNa3aWVB SH
UNW 22Sea HSHN -N HN HNa35BTT Ua2Na 5eBH/e Sea H2a
UNSea g -22 3HN5UNW -35pUaWSH1BpUH W IUW BaI W35UNW
-N BaWHEI Sea -22SH1Ba Ba353HN UNW NaB R
BaI 3aWSea 2pa2HXU 1-35 a2H Sea 5eBaWHEI HXWNU3-NBa
, N Ba -UNW U 1-35W U2 a 2aWSe-NWNU3-N5

a HN2 WUN ea 1HaNu2U 1-35HXSea Ba35HN BaNWH5
BU/a UWaWSe-NWNU3-N5

3 apU -N HN HN5B 35UN, Ba-

R aWB 35UNHX-N N-N5U-5aI 3 25 B2HB1-2aHSHU U-2
BaWi Ba a3- W HX3HN5B 35UN-35pUaW H 2 3- W - W WNU2
-IpaBW 3e-N a UNSea WNU3-NBa HXSea BaWi Ba 1 BW-N5SH4a35UN
HX S ,

- HaNu2T 1-35 ea Ba353H 2 BaW5UNSea IaWB 35UNHX-N
N-N5U-5aI 3 25 B2HB1-2aHSHU U-2BaWi Ba -N -N-IpaBW
3e-N a UNSea WNU3-NBa HXSea BaWi Ba ea 1HaNu2U 1-35W
HXSea Ba35HN N-N5U-5aI 3 25 B2HB1-2aHSHU U-2
BaWi BaW-Ba IUW WI UNSea BXSTR -51-/aW -N

T 1-35 BUBSH UJ-SUN HANUJ2 WUNX3-N5

3 UJ-SUN a-Wa ea BHa35 UUNBHEHB5a UJ-SUN
a-WaW R UN4a3SUN HX5a B XSTR eUe
UaNWa 5e-5 1HN5ea IUSHpaB HX-N N-N53U-5aI
-Be-aHH U-2HB1-2HNSHH U-2BaW Ba IUSHpaB I BN
3HNSB 3SUN -2/ BH N IUS B-NBaW UeUN Xa5HX5ea
IUSHpaB U a e-2aI HBBaI Ua35aI SH5eaB- Ba-W HNSB 3SUN
U2NH5BaW a N525ea IUSHpaB e-W aaNIHB aNaI -
-2XaI -Be-aHH USHB1-2HNSHH US -N USMHaNUJ2
WUNX3-NBa ap-2 -5aI 3HNW5a5 Ue S , RaW BaW
3HNW BaI WUNX3-N5 U a -pHUaI BHa35BaI aWUN TX
-pHU-NBa UNH5Xa-W2a 5ea BaW Ba U a W a35SH- I-5
Ba3HpaB UJ-SUN1BH B -W11BHBU5a TXe -NBa -UNW-Ba
IUSHpaBaI 5ea 4-N aBN-BUNH HN5 3HBNaB U a 3HN5-35aI
-N -21BbaI BaWa UaI -2XBNJ a-2e-N 4-Xa5 Ha
S , Ua2NaW a -N 23 RaW BaW
Ha U a XZH aI

I MNUW Ha USUN 3 25 B2BaW BaW-Ba 2B-5aI UeUN5ea
3HNSB 3SUN3HBUHBHX5ea 1BH HMI apU -N HN -W
Ua2Na a SH1BapUH W BH N IUS B-NBa -5eUW2B-SUN-N
5ea - WNa HXB3HB aI 3 25 B2BaW BaWNHI Ua35U 1-35WN
3 25 B2BaW BaW H 2 HB3 BXH 3HNSB 3SUNHX5ea 1Ua2Na
ea 3HNSB 3SUNV/ UY -Ba- XB5ea apU -N HN -W
Ua2Na H 2 a 2B-5aI HN- -3Ba 1-Ba2 UeUN5ea IUS B-NBa
3HBUHBHX5ea a USUN TN2-N MaIaB Ua2Na a SH1BapUH W
/ BH N IUS B-NBa -5eUW2B-SUN-N 5ea - WNa HXB3HB aI
3 25 B2BaW BaWNHI Ua35U 1-35WN3 25 B2BaW BaW H 2
HB3 BXH 3HNSB 3SUNHX5ea 1Ua2Na Ua UW I a SH
a 5aNpa / BH N IUS B-NBa XH 5ea TN2-N MaIaB Ua2Na
5eaBa UW52a 1HaNUJ2XB1-2HNSHH U-2BaW BaWUN5ea apU
-N HN HNSB 3SUN, Ba- paB 2 UWeUe2 NUa2 5e-5-N
N-N53U-5aI 3 25 B2HB1-2HNSHH U-2BaW Ba - a
aNBH NaBaI I BN 3HNSB 3SUN H apaB 1HNW3e IUSHpaB
5ea U 12a aN5-SUNHX R BaI 3a 5ea U 1-35SH- 2apa2HX
2aW5e-NWUNX3-N5

a HN2 WUN ea 1HaNUJ2U 1-35HX5ea BHa35 N-N53U-5aI
3 25 B2HB1-2HNSHH U-2BaW BaWU2aW5e-NWUNX3-N5

I 52a Ba HNSB 3SUN, Ba-

R aVB 3SUNHX-N N-N53U-5aI 3 25 B2HB1-2HNSHH U-2
BaW Ba a3- W HX3HNSB 3SUN-35pUaW H 2 3- W - W W-N5U2
-I paB 3e-N a UN5ea WUNX3-NBa HX5ea BaW Ba 1 BW-N5SH4a3SUN
HX S ,

MNUW WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

- HANU2T 1-35 ea BHa353H 2 BAW5UN5ea I aWB 35UNHX- N
N-NSU-5aI 3 25 B2HB1-2HNSHY U-2BWI Ba -N -N-IpaB
3e-N a UN5ea WUNX3-NBa HX5ea BAWI Ba ea 1HfANU2U 1-35W
HX5ea BHa35HN N-NSU-5aI 3 25 B2HB1-2HNSHY U-2
BWI BaW-Ba IUS WAI UN5ea B XSTR -51-/aW -N

T 1-35 BHBH UJ-5UN HfANU22 WUNX3-N5

3 UJ-5UN a-WBa ea BHa35 U2NBHEHB5a UJ-5UN
a-WBaW R UN4a35UN HX5ea B XSTR eUe
U2aNWBa 5e-5 1HN5ea IUSHpaB HX-N N-NSU-5aI
-Be-aHUY U-2HB1-2HNSHY U-2BWI Ba IUSHpaB I BN
3HNSB 35UN -22/ BH N IUS B-NBaW UeUN Xa5HX5ea
IUSHpaB U2 a e-2aI HBBaI Ua35aI SH5eaB-Ba-W HNSB 35UN
U2N5BaW a N525ea IUSHpaB e-W aaNIHB aNaI -
-2XaI -Be-aHUY USHB1-2HNSHY US -N USMHfANU2
WUNX3-NBa ap-2 -5aI 3HNW5a5 Ue S , RaWI BaW
3HNW5aI WUNX3-N5 U2 a -pHuaI BHa35BaI aWUN TX
-pHU-NBa UNH5Xa-W2a 5ea BAWI Ba U2 a W a35SHI-5-
Ba3HpaB UJ-5UN1BY B -W11BHIB5a TXe -NBa -UNW-Ba
IUSHpaBaI 5ea 4-N aBN B UNH H N5 3HBNaB U2 a 3HN5-35aI
-N -21B-BaI BAWa UaI 5ea -2XBNJ a-2e -N 4-X5
Ha S , Ua2NaW a -N 23
RaWI BaW Ha U2 a X2H aI

I MNUW Na 3 25 B2BWI Ba 5ea MN5-N H aBHW UW
2B-5aI -I -3aN5SH5ea 3HNSB 35UN3HBBJ HBHX5ea H aB 5a
Ba Ua2Na T 1-35 R -IIBaWU 1-35W5H5eUWAWI Ba
H5eaBB3HB aI 3 25 B2BWI BaW-Ba 2B-5aI UeUN5ea
3HNSB 35UN3HBBJ HBH5ea 1BH1HWI 3HNSB 35UNV/ UN -Ba XB
5ea -35 W -WN Ua2Na a SH1BapUH W BH N IUS B-NBa
-N 5ea - WNBa HXB3HB aI 3 25 B2BWI BaWNHI Ua35U 1-35W
HN3 25 B2BWI BaW H 2 HB3 BUN5eaW-Ba-W a SH1-V
/ BH N IUS B-NBa -N 2H 1-2HNSHY U-2WNU5pU5 5eaBa UW
252a 1HfANU2XB1-2HNSHY U-2BWI BaWUN5ea 5a Ba
HNSB 35UN, Ba- HI Ua35U 1-35WN1-2HNSHY U-2BWI BaW
H 2 HB3 B T5UWUe2 NUa2 5e-5-N N-NSU-5aI 3 25 B2HB
1-2HNSHY U-2BWI Ba - a aNBH NaBaI I BN 3HNSB 35UN
H apaB 1HNW3e IUSHpaB 5ea U 12a aN5-5UNHX R
BaI 3a 5ea U 1-35SH- 2apa2HX2W5e-NWUNX3-N5 , N
Ba -UNU U 1-35W U2 a 2W5e-NWUNX3-N5

a HN2 WUN ea 1HfANU2U 1-35HX5ea BHa35 N-NSU-5aI
3 25 B2HB1-2HNSHY U-2BWI BaWU2aW5e-NWUNX3-N5

R HNSB 35UNHX5ea H aB 5a Ba Ua2Na H 2 3- W- 2aW
MNUW WESTR XB4-N5 , N R(paBg -5aBRUe5, 1123-5UNW
-Be
Tg S4 SR S T T -/a

5e-NW/NX3-N5-IpaBW 3e-N a UN5ea eUWHB3 UN5a/ B5 HX5ea MN5-N
H aB H W 3H 12a - 1HaNU22 W/NX3-N5eUWHB3-2BaWI Ba - W
IaXNaI UN4a3SUN HX S ,

- HaNU2T 1-35 ea BHa353H 2 BaW25UN-N-IpaBW 3e-N a UN
5ea eUWHB3 UN5a/ B5 HX5ea MN5-N H aB H W 3H 12a ea
1HaNU2U 1-35WHX5ea BHa35HN5ea MN5-N H aB H W -Ba
IUV WAI UN5ea BXS TR -51-/aW -N

T 1-35 BHB3H UJ-5UN aW5e-NW/NX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMHaNU2
U 1-35 a3- W5ea 3HNMB 3SUN a5eH HX5ea H aB 5a Ba
Ua2Na H 2 e-pa UNU -2U 1-35HN5ea eUWHB3 UN5a/ B5 HX5ea
MN5-N H aB H W HB5W WBU5aI Xa-5 BaW-N H 2 BaW25UN
- 2aW5e-NW/NX3-N5U 1-35HN3 25 B2BaWI BaW

I MNUV W ea 3HNMB 3SUNHX5ea H aB 5a Ba Ua2Na
H 2 3- W - 2aW5e-NW/NX3-N5-IpaBW 3e-N a UN5ea eUWHB3
UN5a/ B5 HX5ea MN5-N H aB H W 3H 12a - 1HaNU22
W/NX3-N5eUWHB3-2BaWI Ba - WaXNaI UN S , 4a3SUN
TX1BIHMI 3HNMB 3SUN-35pU5aW IpaBW2 U 1-355ea
1e W3-2Xa-5 BaW5e-53HNpa 5ea eUWHB3 W/NX3-N5a HX5ea
1H aB H W 3H 12a U H 2 a - W/NX3-N5U 1-35 TNU2-5UN
HX5ea 1Ua2Na H 2 N5IUB32 U 1-35-N Xa-5 BaW WBU5aI
U5ea 1H aB H W ea H aB 5a Ba Ua2Na H 2 a
UNW 2aI -I -3aN55H5ea 1H aB H W -N 5ea 1Ua2Na H 2
Ia2paB -5aB5H-NHlaNIU5e 5e-53 BaN2 Ba3aIpaW -5aBXH
5ea MN5-N H aB H W , Na 3HNBa5a H H 2 a
3HNMB 35aI -55ea aNI HX5ea 1Ua2Na eU5e H 2 2a -5aB
UN5H5ea HlaNIU5e aeUN 5ea 1H aB H W , XaB3HNMB 3SUNUW
3H 12a5a 5ea HN2 pUW2a 1H5UNHX5ea 1Ua2Na H 2 a 5ea
3HNBa5a H eU5e H 2 2a2apa2 U5ea a U5UN I5e ea
1Ua2Na H 2 N5 a pUW2a XH 5ea 1H aB H W W5a U H 2
a UNW 2aI NaB BI N eU3HNMB 3SUN a5eH H 2 e-pa
UNU -2U 1-35HN5ea eUWHB3 UN5a/ B5 HX5ea MN5-N
H aB H W -N U5W WBU5aI Xa-5 BaW-N H 2 BaW25UN- 2aW
5e-NW/NX3-N5U 1-35HN3 25 B2BaWI BaW

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN5ea eUWHB3
UN5a/ B5 HX5ea MN5-N H aB H W 3H 12a U2aW5e-N
W/NX3-N5

I. Noise

BHa35 HNMB 3SUN

MNUV WESTR XB4-N5 , N RIpabg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

- 4apaN - W - RaWpHUB HNSB 35UN, Ba-

T HNSB 35UNHX5ea 4apaN - W - H 2 / aNaB 5a I-
NJe5NHUW IN 2apa2WH2aW5e-N , aUe5aI Ia3Ua2WI , -55ea
Na-BaVNHUW WNW5pa Ba3a1SHB

- HaN5U2T 1-35 ea BH353H 2 BaW25UNUBa-WI NHUW
2apa2W ea 1HaN5U2U 1-35WHX5ea BH35HNNHUW 2apa2W-55ea
4apaN - W - -N RaWpHUB HNSB 35UN, Ba- -Ba IUW WI UN
5ea BXSTR -51-/aW -N

T 1-35 BHBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBaI XB5eUMHaN5U2
U 1-35 a3- W 5ea 4-N aB-N B UNH HN5 HUW S2a aN5NHUW
W-N-B W H 2 NH5 a a 3aaIaI -N BaWaN5W H 2 NH5
H5eaB UW a a 1HwI SHW W-N5U2UNBa-WaWUN- IaN5NHUW
2apa2W

I MNUW W HNSB 35UN-55ea 4apaN - W - -N RaWpHUB
HNSB 35UN, Ba- H 2 / aNaB 5a INHX2aW5e-N I , -55ea
Na-BaVNHUW WNW5pa Ba3a1SHB -WI HN5ea a U aN55e-5
H 2 a WI -55ea W5a aWU -5aI NHUW 2apa2WH 3HNSB 35UN
-W a- eH B HB I- -N UN2 Ia aWU -5aWHXa U aN5
W/a UeH BMaBI- -N 5ea 1aBaN5/a HXSU a 5ea a U aN5
H 2 HlaB 5a -51a- 1H aB TN3-23 25UN U 1-35WNH
-I W aN5W aBa -Ia XBNHUW 2apa2BaI 35UNM a SH
SHIH B leU Xa-5 BaWwI NI -BaBWHBW5 5a HX5ea -BNHUW
BaI 35UNa U aN5 HUW XH 2B-2JaI WI BaWW3e -W
3HNSB 35UN-35pU5aW5 I3-22 X2WHX - H 5 I , U5e a-3e
IH 2W HXI U5-NBa XH WI Ba SHBa3a1SHB g eaNNHUW HN5ea
3HNSB 35UNW5a UW I H 5 HBB3a1SHB-5- I U5-NBa HX
Xa5XH 5ea 3HNSB 35UNW5a 5e-5e-pa -N NUNaBB 15aI pld HX
5ea 3HNSB 35UNW5a H 2 a 1aBaN5a NHUW NH/ Ba-5aB5e-N
I , eUe U5ea BaWaN5U2W-N-B XB5ea HN5 HX4-N
aB-N B UNH eaBa -Ba NHBa3a1SHBWI -3aN5SHHBUN5ea p3UN5 HX
5ea W5a , 2a U5UN BaWaN5aW-Ba 2B-5aI H5a 5e-N Xa
XH 5ea BH353HNSB 35UN-Ba- -N H 2 5eaBaXBa a
a 1HwI SH3HNSB 35UNNHUW 2apa2WH aB5e-N I , T5UNH5
a 1a35aI 5e-5 WBMHX5ea 4 MBaW54aP3a 4-N5 , N- lpuA
B2 H 2 a WUNX3-N52 -Xa35aI 5ea BH35 a3- W HX5ea
Ua IUW-NBa W1-B5UN U5XH 5ea 3HNSB 35UNW5a -5 B2
-N -N -Ia W5B 35 BaW H 2 1BpUa -II 5UN-2Wla2I UW XH
5ea 3HNSB 35UNNHUW -55ea W5a ea -35 -2NHUW U 1-35
aNpa2Hla H 2 5e W a W -2aB5e-N Xa5UN -N -Ba-W

a HN2 WUN ea 1HaN5U2U 1-35HX5ea BH35HN- IaN5NHUW

MNUW WE STR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

2apa2WU2aW5e-NWNU3-N5

4-N5 , N RlpaB HNSB 35UN, Ba-

T HNSB 35UNHX5ea 2 Na H2 Ua2Na 3H 2 a 1HW
WBHX5ea 4-N5 , N lpa B U2SHUNBa-WI - laN5NHUW 2apa2W

- HANSU2T 1-35 ea BHa353H 2 BAW25UNUNBa-WI NHUW 2apa2W
XB WBHX5ea 4-N5 , N lpa B U2 ea 1HANSU2U 1-35WX
5ea BHa35HN- laN5NHUW 2apa2W Ba IUW WI UN5ea BXSSTR
-51-/a

T 1-35 BHBSH UJ-5UN aW5e-NWNU3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMHANSU2
U 1-35 a3- W NHUW U 1-35W H 2 a 2aW5e-NWNU3-N5

I MNUW HNSB 35UNHX5ea 2 Na H2 Ua2Na 3H 2 a 1HW
WBHX5ea 4-N5 , N lpa B U2SHUNBa-WI - laN5NHUW
2apa2W lpaN5ea Ua IUW Nba XH 5ea 4 MBV4aP3a
4-N5 , N lpa B U2SH5ea 3HNSB 35UN-Ba- UUMHWW 2a 5e-5
SB U WBW - laBa lpa NHUW XH 3HNSB 35UNHX5ea 2 Na H2
Ua2Na H apaB 5ea HpaB 2WI N 2apa2 H 2 a 2aW5e-N
I , , I UUN-2Ba I 35UNW - HB3 BI a SHSHH B leU-2
Xa-5 Baw-N NHUW - WBI 5UN pa/a5-5UN eaBaXB 5ea
3HNSB 35UNNHUW U 1-35SHBU WBW H 2 a 2aW5e-N
WNU3-N5

a HN2 WUN ea 1HANSU2U 1-35HX5ea BHa35HN- laN5NHUW
2apa2WU2aW5e-NWNU3-N5

T HNSB 35UN-55ea HSHN -N HN HNa35HBT Ua2Na
H 2 3Ba-5a IN2apa2WX2aW5e-N I , -55ea Na-Ba WNHUW WNW5pa
Ba3a1SHW

- HANSU2T 1-35 ea BHa353H 2 BAW25UNUNBa-WI NHUW
2apa2W ea 1HANSU2U 1-35WX5ea BHa35HN IN2apa2W 5NHUW
WNW5pa Ba3a1SHW Ba IUW WI UN5ea BXSSTR -51-/a

T 1-35 BHBSH UJ-5UN aW5e-NWNU3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMHANSU2
U 1-35 a3- W NHUW U 1-35W H 2 a 2aW5e-NWNU3-N5

I MNUW HNSB 35UN-55ea HSHN -N HN HNa35HBT
Ua2Na H 2 3Ba-5a IN2apa2WX2aW5e-N I , -55ea Na-Ba W
NHUW WNW5pa Ba3a1SHW ea 3HNSB 35UNBa2-5aI NHUW U 1-35W
H 2 a 2aW5e-NWNU3-N5 ea 3HNSB 35UN-Ba- HX5ea

MNUW WESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

1BH1HWI HSHN -N HN HNa35BIT Ua2Na UWa HFa XH
1aB -Na5NHUW WNW5pa Ba3a1SHBW3e -WeH aW WbWHX5ea
HSHN -N HNRU/a pUa B U H 2 a -Xa35aI Na-B5ea
SB Uea-I UX3HNSB 35UN-35pUaW Ba HB3 BBN HUW 2apa2W-5
Xa5 H 2 a - H 5 I ea NHUW 2apa2W H 2 IU UNW
-WB U WBWB paBa 5ea SB U-N /-UNIUV Nba XH 5ea
3HNSB 35UN-Ba- HUW H 2 HN2 -Xa35- W -21HSHNHX5ea
SB UNa-BW5ea 3HNSB 35UNWa -N H 2 U 1-351aBNW eH
-Ba H Ua -N N51aBNW BaWUN UN1aB -Na5SB 35 BaW eUW
U 1-35UW5eaBaXBa 3HNW aBaI 2aW5e-NWUNX3-N5

a HN2 WFN ea 1HfaNU2U 1-35HX5ea BHa35HN- laN5NHUW
2apa2WUaW5e-NWUNX3-N5

BHa35 1aB 5UN-N -UNaN-NBa

- 4apaN - W - -N RaWpHUB 4-N5 , N RUpaB apU -N HN -N 5a
Ba HNSB 35UN, Ba-W

T -UNaN-NBa -35pUaWXB5ea 1BH1HWI 1Ua2NaW-N
X3UaW H 2 N51BH 3a - N53a- 2a NHUW UNBa- W XBBW aNaWUN
5ea / aNaB 2-Ba-

- HfaNU2T 1-35 ea BHa353H 2 BaW5UNUNBa-WI NHUW 2apa2W
XBBW aNaW ea 1HfaNU2U 1-35WHX5ea BHa35HNNHUW
UNBa- W XBBW aNaWUN5ea / aNaB 2-Ba- -Ba IUW WI UN5ea
B XSTR -51-/ a

T 1-35 BHBSH UU-5UN aW5e-NWUNX3-N5

3 UU-5UN a-WBa H UU-5UNUWa UBI XB5eUMHfaNU2
U 1-35 a3- W U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUVW -UNaN-NBa -35pUaWXB5ea 1BH1HWI 1Ua2NaW-N
X3UaW H 2 N51BH 3a - N53a- 2a NHUW UNBa- W XBB
BaW aNaWUN5ea / aNaB 2-Ba- -UNaN-NBa SB 3 W - -II
WUe52 SH5ea NHUW aNpUBN aN5 55ea -IIUUN2NHUW H 2 a
UeUN5ea NHB -2SB X3 p-BU U5 BNV a aB aN3 Ba1-UBW
NHUW 2apa2W - a eUeaBUX3HNSB 35UNa U aN5UWa UBI
XB-Na 5aN aI 1aBHI H apaB a aB aN3 W5 -5UNWHN-
1Ua2Na H 2 a UNBa aN5 T 1-35W H 2 a 2aW5e-N
WUNX3-N5-N NH UU-5UNUWa UBI

a HN2 WFN ea 1HfaNU2U 1-35HX5ea BHa35HNHUW 2apa2WXB
BaW aNaWUaW5e-NWUNX3-N5

J. Aesthetics

MNUVW STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/ a

BHa35 HNB 35UN

- 4apaN - W - -N RaWBHUB HNB 35UN, Ba-

, S4 BHa353HNB 35UN H 2 BaW2UN- 2aW5e-NWUNX3-N5
U 1-35H-aV5ea3W

- HaN5U2T 1-35 ea BHa353H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea3W ea 1HaN5U2U 1-35HX5ea BHa35HN-aV5ea3W-Ba
IUV WAI UN5ea BXSSTR -51-/aW -N

T 1-35 BHB5H UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMHaN5U2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNIUVW ea BHa35 H 2 BaW2UNNa 3HNB 35UNHN5ea Ba-B
HX5ea I- -N Ba2B-5UNHXBI I W2B-5aI U5UN5ea BaWBHUB-Ba-
5e-5 H 2 e-pa 5a 1HB B pUW-2U 1-35W HNB 35UNU 1-35W
H 2 a W55 5aB -N 5ea BaW2UN V5B 35 BaW H 2 a
3HNW5aN5 U5 5ea a U5UN 3e-B 35aBHX5ea -Ba- TN5eUW
3HNB 35UN-Ba- BHa35 Ba2-5aI 3HNB 35UN-35pU5aW H 2
3Ba-5a 2aW5e-NWUNX3-N5pUW-2U 1-35W 15 H 2 N5e-pa -
W V5N5U2-IpaBaXa35HN- V5aN3 pUV5 W V5N5U22 I- -/a
V5aN3 BaWI BaW5BW V5N5U22 Ia/BIa 5ea a U5UN pUW-2
3e-B 35aBHB -25 HX5ea W5a -N U5WWBH NIUVW

a HN2 UN ea 1HaN5U2U 1-35HX5ea BHa35HN-aV5ea3WUW
2aW5e-NWUNX3-N5

4-N5 , N RpaB HNB 35UN, Ba-

, S4 BHa353HNB 35UN H 2 BaW2UN- 2aW5e-NWUNX3-N5
U 1-35H-aV5ea3W

- HaN5U2T 1-35 ea BHa353H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea3W ea 1HaN5U2U 1-35HX5ea BHa35HN-aV5ea3W-Ba
IUV WAI UN5ea BXSSTR -51-/a

T 1-35 BHB5H UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMHaN5U2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNIUVW ea Na 1Ua2NaW5H a 2B-5aI UN5ea 4, R
HNB 35UN, Ba- H 2 a UN5-2aI NaB BI NI -N 1Ba
a U5UN WBX3a 3HN U5UNW H 2 a BaV5BaI 5H5ea - U
a 5aN5 1HWU2a -XaB3HNB 35UN-35pU5aW-Ba 3H 12a5a

MNIUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

Na-Beal BB W 1 SH Xa5UNI U a5aB H 2 a 12-3aI UN
32 VABWI -3aN5SH5ea 1Ua2Na BH 5aW a UNBVB 35 Ba -N
3HNMB 35UNXB5ea BHa35 H 2 HB3 BUN-N-Ba- -2a-I 2-B a2
IUV BaI -35pUaWW3e -W- 3HNMB 35UN BH I U UN
/Bpa2 UNW -N HBB 1Ua 3-p-5UN BN 3HNMB 35UN
ea-p a U aN5-N -35pUaW H 2 a pUW2a XH BaNWH5
RH-I 55eUW 1-35 H 2 a 5a 1HBB -N WH55aB , 55ea
12 N a 1H2 V1H N5Ba- HX4apaN - W - 5ea U5- a
VB 35 Ba -N SBW B3 HX5ea 2 N a H2 Ua2Na H 2 a
pUW2a H apaB 5eUW-Ba- UNH5pUW2a XH -Ba- W-33aWU2a SH
5ea 1 23 -N UW3H 1-5U2a Ue H5eaB -5aBB2-5aI IpaBWHN-N
3HNpa -Nba VB 35 BaWON5ea p3UN5 eaBaXB WH55aB
U 1-35W BN 3HNMB 35UN H 2 3HNBU 5a SHH2 UNB
3e-N aWON5ea pUW2a 1e V3-2aNpUBN aN5-N W3e 3e-N aW-Ba
UN3e-B 35aB Ue 5ea 4, R g -W -Ba- TN5ea 4, R HNMB 35UN
, Ba- 5ea BHa35 H 2 NH5e-pa -N-IpaBw aXa35HN- WaN3
pUW W VNSU2 I- -/a WaN3 BaWI BaWHBW VNSU2
Ia/B Ia 5ea a U5UN pUW-23e-B 35aBHB -25 HX5ea W5a -N U5W
WBH N UN W ea BHa35 H 2 e-pa -2aW5e-NWUNX3-N5
U 1-35HN-aV5ea53WUN5eUW-Ba-

a HN2 WHN ea 1HaNSU2U 1-35HX5ea BHa35HN-aV5ea53WUW
2aW5e-NWUNX3-N5

3 apU2 -N HN HNMB 35UN, Ba-

, S4 BHa353HNMB 35UN H 2 BaW25UN- 2aW5e-NWUNX3-N5
U 1-35SH-aV5ea53W

- HaNSU2T 1-35 ea BHa353H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea53W ea 1HaNSU2U 1-35WHX5ea BHa35HN-aV5ea53W-Ba
IUV WAI UN5ea BXSSTR -51-/a

T 1-35 BHB5H UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMH5aNSU2
U 1-35 a3- W 5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUVW ea apU2 -N HN-Ba- e-W aaNW a35aI SH
IUV B-NBa I BN 3HNMB 35UN HWBa3aN2 HX5ea TN2-N
MaIaB Ua2Na BN BHa35 Ba2-5aI 3HNMB 35UN ea-p
a U aN5-N -35pUaW H 2 a pUW2a XH eH aW55 -5aI -
WH5IUV N5a SH5ea WI 5e aVHX5ea 3HNMB 35UN-Ba- H apaB
5eUW 1-35 H 2 a 5a 1HBB -N H 2 NH5BaW25UNWUNX3-N5
2HN 5aB 3e-N aW ea -IIU5UNHX- Na NaB BH N 1Ua2Na
H 2 NH5e-pa - WUNX3-N5-IpaBw aXa35HN- WaN3 pUW
W VNSU2 I- -/a WaN3 BaWI BaWHBW VNSU2 Ia/B Ia 5ea

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

a ~~UW~~ pUW-23e-B35aBHB -25 HX5ea W5a -N UWWBH N UN W

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN-aW5a53WUW
2aW5e-NWUNX3-N5

I 52a Ba HNB 35UN, Ba-

, S4 BHa353HN 35UN H 2 BaW25UN- 2aW5e-NWUNX3-N5
U 1-35H-aW5a53W

- HaNU2T 1-35 ea BHa353H 2 e-pa - Na/ -5pa U 1-35HN
-aW5a53W ea 1HaNU2U 1-35HX5ea BHa35HN-aW5a53W Ba
I W5 W5I UN5ea B XSTR -51-/ a

T 1-35 BHBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UB1 XB5eUM HaNU2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUW ea H aB 52a Ba -N -35 W -WUWUa2NaW
H 2 a 3HN 35aI -I -3aN5SH-N-Ba- 5e-53HN5-UNWp-BH W
UN ~~W5~~2X3U5aWUN-11UNSHBaWaN5U2Iapa2HI aN5 BN
3HN 35UN ea-p a U aN5-N -35pU5aW H 2 a pUW2a XH
eH aW-N BH-I - W-I -3aN5SH5ea 3HN 35UN-Ba- 55eUW
U 1-35 H 2 a 5a 1HB -N H 2 N5BaW25UNWUNX3-N5
2HN 5aB 3e-NaW ea -35 W -WUW Ua2Na H 2 N5- Xa35
-aW5a53 BaW BaWUNBa U5 H 2 a 12-3aI aN5Ba2 U5eUNa U5UN
BH-I - W eUe H 2 a BaW5aI SH1Ba 3HN 35UN3HN UN
X2H UN U5UNW 2-5UN , 11BH U -5a2 Xa5HX5ea H aB
52a Ba Ua2Na H 2 -2W a 12-3aI U5eUNa U5UN W5a5W
-N W H 2 N5U 1-35-aW5a53 BaW BaW ea Ba -UNW
Xa5HX5ea H aB 52a Ba Ua2Na H 2 a 12-3aI
NaB BH N -I -3aN5SHRpaBWa , paN a -N 5ea MN5-N H aB
2N5 W5W 5eHX -2Ba -//Ba/ -5a -5aB2 UNW -Ba- ,
3HN 35a H H 2 a 3HNW5aN5 U5e H5eaBUN ~~W5~~2X3U5aW
-N -5aB H 2 N5e-pa - W W5NU2-IpaBa Xa35HN- WaN3
pU5 W W5NU2 I- -/a WaN3 BaW BaW5BW W5NU2
Ia/BIa 5ea a ~~UW~~ pUW-23e-B35aBHB -25 HX5ea W5a -N U5W
WBH N UN W T 12a aN5-5UNHX5ea BHa35 H 2 N5e-pa -
WUNX3-N5-IpaBa U 1-35HN-aW5a53W

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN-aW5a53WUW
2aW5e-NWUNX3-N5

BHa35 1aB 5UN-N -UN5aN-N5a

- 4-N5 , N RpaB4a/ aN5,

MNUW WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

, S4 BH35HlaB SUNW H 2 BW2UN- 2W5e-NWNU3-N5
U 1-35H-a53W

- HANU2T 1-35 ea BH353H 2 e-pa - Na/ -5pa U 1-35HN
-a53W ea 1HANU2U 1-35HXea BH35HN-a53W-B
I W WI UN5ea BSTR -51-/a

T 1-35 BBSH U-SUN aW5e-NWNU3-N5

3 U-SUN a-WB H U-SUNUBa UI XB5UMHANU2
U 1-35 a3- W5ea U 1-35W H 2 a 2W5e-NWNU3-N5

I MN U W BH35HlaB SUNW3H 2 BW2UN- eUeaBWBHUB
a2p-SUNI BN 5ea H5eWX -Be 5eH / e 4a15a aB5e-N
H 2 HB B NaB H BH353HN SUNW4apaN - W - -W
IaWNaI 5H3N5-UNB NXX-WBU5aI Ue - a-BXHI apaN5
-N 5ea W2 - W-N W-5-Na2p-SUNHX Xa5- Hpa a-N
W- 2apa2 W , W 3HN SUNHX5ea 3HNB 3SUNHX5ea X3U5
5ea 4, S U-5aI -IpaBU 1-35WHe- U-5-N -WBU5aI
12N5-N -NU -2Wa3UW UeUN5ea -B- 1WB- HX5ea I- 5e-5
UW a2H Xa5- Hpa W 5ea WB3a a2p-SUNHX5ea
BWBHUB NaB a-BXHI 3HN SUNW NaB5ea BH35 -N
Ia1aN U HNB UNX2-N HeaB3HN SUNW5ea BWBHUB3H 2
5a 1HB B2 Ia5-UN -5aB 15H-Na2p-SUN Xa5- Hpa W
I BN 5ea H5eWX -Be 5eH / e 4a15a aB, 2eH / e 5ea
BH353H 2 BW2UN- / B-5aBpH2 aHX -5aB aUN B5-UNaI UN
5ea BWBHUB5e-N NaB H BH353HN SUNW5ea 1BWN3a HX
-5aBU3HNW5a5 Ue a UUN HlaB SUNW-N 3HNW5a5 Ue 5ea
pUW-23HN5 HX- BWBHUB WI XB5HI 3HNB21 BHW eUW
aX35U3HNW5a5 Ue 5ea pUW-2W5UN NaBa UUN HlaB SUNW
-N 5ea BWBHUBUN5UN-N-B- HlaN5H5ea 1 23 eaBXH
U 1-35WH-a53W3H BH35HlaB SUNW 1WB- HX4apaN
- W - -N RaWBHUB-B 2W5e-NWNU3-N5

a HN2 WUN ea 1HANU2U 1-35HXea BH35HN-a53WUW
2W5e-NWNU3-N5

4-N5 , N RpaB4a/ aN5

, S4 BH35HlaB SUNW H 2 BW2UN- 2W5e-NWNU3-N5
U 1-35H-a53W

- HANU2T 1-35 ea BH353H 2 e-pa - Na/ -5pa U 1-35HN
-a53W ea 1HANU2U 1-35HXea BH35HN-a53W-B
I W WI UN5ea BSTR -51-/aW -N

T 1-35 BBSH U-SUN aW5e-NWNU3-N5

MN U WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

3 UJ-5UN a-WB H UJ-5UNWB UB I XB5eUM HfaNU2
U 1-35 a3- W 5ea U 1-35W H 2 a 2W5e-NW NX3-N5

I MN UJ W RpaB4a/ aN5 UNH5UN-N-Ba- pUW2a SH5ea / aNaB2
1 23 T 12a aN5 UNHX5ea BHa35 H 2 B W25UN5ea I paBWN
HX -5aBWB2a- WI XH 5ea I- H apaB 5ea WI paBWNW H 2
N5UN32 Ia 5ea Ba UB I 3XB2a- WI XH 5ea I- XB4aNUB
g -5aBRUe5W 2U -N5W 15U5eUW 3XB2a- W XH 5ea I- SH5ea
2 Na H2HB 2 Na H2 -W Ua2UNa 5e-5 XB 3e HX5ea
a-B 3H 1B W5ea a U5UN XH UN5ea BpaB a5 aaN5ea 4apaN
- W - -N 52a g aUB 4UN3a BHa35HlaB 5UNW H 2 N5
-Xa355eUWXH NH3e-N aW5H5ea BpaB-N U5W WBU5aI BI-BUN
pa/ a5-5UN H 2 HB3 B-N U 1-35WH-a5ea53W H 2 a 2W
5e-NW NX3-N5

a HN2 WJN ea 1HfaNU2U 1-35HX5ea BHa35HN-a5ea53WW
2aW5e-NW NX3-N5

3 4-N5 , N RpaB4a/ aN5

, S4 BHa35HlaB 5UNW H 2 B W25UN- 2aW5e-NW NX3-N5
U 1-35H-a5ea53W

- HfaNU2T 1-35 ea BHa35H 2 e-pa - Na/ -5pa U 1-35HN
-a5ea53W ea 1HfaNU2U 1-35WHX5ea BHa35HN-a5ea53W-Ba
I U5 W WI UN5ea B XSTR -51-/a

T 1-35 BHB5H UJ-5UN aW5e-NW NX3-N5

3 UJ-5UN a-WB H UJ-5UNWB UB I XB5eUM HfaNU2
U 1-35 a3- W 5ea U 1-35W H 2 a 2W5e-NW NX3-N5

I MN UJ W T 12a aN5 UNHX5ea BHa35 H 2 B W25UN- / Ba-5aB
N aBHXI- W5eBH / eH 55ea a-B eaNNHXH a U5UN5ea
4, R 3e-NNa2 aBH XH I- W-N 2H aBXH pH2 aWUN5ea
3e-NNa2HNI- W eaNXH WB3 B BfaN2 5eUWBpaBW/ aN5UW
IB HpaB 1aBaN5HX5ea I- WUN-N-paB/a a-B-N HN H5
H5eaBI- Wa eU5W UNU -2XH W ea BHa35 H 2 UN3a- W 5ea
N aBHX aBH XH I- W - H 5 1aBaN5 eUWUN3a- W UN5ea
N aBHX aBH XH I- W WBU5aI U5 U 12a aN5 UNHX5ea
BHa35 H 2 N5N53a- 2 3e-N a 5ea a U5UN pUW-23e-B35aB
HB -25 HX5eUW/ aN5HX5ea BpaB T 1-35WH-a5ea53W H 2
a 2W5e-NW NX3-N5

a HN2 WJN ea 1HfaNU2U 1-35HX5ea BHa35HN-a5ea53WW
2aW5e-NW NX3-N5

I 4-N5 , N RlpaB4a/ aN5

, S4 BHa35HlaB 5UNW H 2 BaW25UN- 2aW5e-NWUNX3-N5
U 1-355H-aV5ea53W

- HaN5U2T 1-35 ea BHa353H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea53W ea 1HaN5U2U 1-35WHX5ea BHa35HN-aV5ea53W-Ba
IUV WAI UN5ea B XSTR -51-/a

T 1-35 BHBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMH5aN5U2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUV WT 12a aN5-5UNHX5ea BHa35 H 2 BaW25UN2H aB
XH WUN5eUWw/ aN5HX5ea BpaB BaN52 5eUBpaBW/ aN5
a 1aBaNaI aBHXH HN- H 5 1aBaN5HXI- W-N HN5ea
Ba -UNV I- W5eaBa UW UNU -2XH UN5ea BpaB ea BHa35
H 2 UNBa-W5ea N aBHx aBH XH I- W 1aBaN5 eUW
UNBa-W UN5ea N aBHx aBH XH I- W H 2 N5N53a- 2
3e-N a 5ea a U5UV pUW-23e-B35aBFB -25 HX5eUWw/ aN5HX
5ea BpaB -N U 1-35WH-aV5ea53W H 2 a 2aW5e-NWUNX3-N5

a HN2 WJN ea 1HaN5U2U 1-35HX5ea BHa35HN-aV5ea53WW
2aW5e-NWUNX3-N5

a 4-N5 , N RlpaB4a/ aN5S

, S4 BHa35HlaB 5UNW H 2 BaW25UN- 2aW5e-NWUNX3-N5
U 1-355H-aV5ea53W

- HaN5U2T 1-35 ea BHa353H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea53W ea 1HaN5U2U 1-35WHX5ea BHa35HN-aV5ea53W-Ba
IUV WAI UN5ea B XSTR -51-/a

T 1-35 BHBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UBI XB5eUMH5aN5U2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUV W MBH S 45Ba5SHRT RU2H5ea BpaB5B paBW
eUe2 B-NUaI W35UNHXR lpaBw/ a H N5 -N UW3e-NNa2UaI
-N 3HNXaI a5 aaN2apaaW ea a55aI -Ba- HX5eUBpaB
W/ aN5UW aNaB2 3HN5-UNaI UN- BUaI 3e-NNa2 Ue 5ea
WBH N UV BpaB aI -N -N W B BaN52 5eUBpaBW/ aN5
a 1aBaNaW aBHXH HN- H 5 1aBaN5HXI- W ea BHa35
H 2 UNBa-W5ea N aBHx aBH XH I- W - H 5 1aBaN5
4 3e - BaI 35UN H 2 N5UN 3a N53a- 2a 3e-N aWON5ea pUW-2

MNUV WESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3e-B 35aBWS3WHX5ea BpaB- B- -N U 1-35WH-aV5ea53W H 2 a
2aW5e-NWUNX3-N5

a HN2 WHN ea 1HaNU2U 1-35HX5ea BHa35HN-aV5ea53WUW
2aW5e-NWUNX3-N5

X 4-N5 , N RpaB4a/ aN5M

, S4 BHa35HlaB 5UNW H 2 B W25UN- 2aW5e-NWUNX3-N5
U 1-35SH-aV5ea53W

- HaNU2T 1-35 ea BHa35H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea53W ea 1HaNU2U 1-35WHX5ea BHa35HN-aV5ea53W-B
I U5 WAI UN5ea B XSTR -51-/ a

T 1-35 BHB5H U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WB H U-5UNUBa UB I XB5eUMHaNU2
U 1-35 a3- V5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUV W aH 5ea RT RU2Hg g H 5X25H5ea 4, R XH
UMaBANNJ2-N U 12a aN5-5UNHX5ea BHa35 H 2 e-pa - -B2
1aBa15U2a aXa35HNV5a- XH I BN 1aBHI WHX2H XH -N
NH1aBa15U2a aXa35I BN 1aBHI WHXeUe XH ea pUW-2
3e-B 35aBWS3WHX5ea -B- -2H 5eUBpaBW/ aN5 H 2 B -UN
NBe-NaI U5e U 12a aN5-5UNHX5ea BHa35-N U 1-35WH
-aV5ea53W H 2 a 2aW5e-NWUNX3-N5

a HN2 WHN ea 1HaNU2U 1-35HX5ea BHa35HN-aV5ea53WUW
2aW5e-NWUNX3-N5

/ 4-N5 , N RpaB4a/ aN5

, S4 BHa35HlaB 5UNW H 2 B W25UN- 2aW5e-NWUNX3-N5
U 1-35SH-aV5ea53W

- HaNU2T 1-35 ea BHa35H 2 e-pa - Na/ -5pa U 1-35HN
-aV5ea53W ea 1HaNU2U 1-35WHX5ea BHa35HN-aV5ea53W-B
I U5 WAI UN5ea B XSTR -51-/ a

T 1-35 BHB5H U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WB H U-5UNUBa UB I XB5eUMHaNU2
U 1-35 a3- V5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUV W ea T 1-35, XaB5ea BHa35HNXH UN5eUW5/ aN5HX
5ea 4, R a3H aWUNBa-WN 2 -5aN -5aI 3H 1-BaI 5H5ea
U aIU5a2 1V5a- V/ aN5 -N UNH5 a-WB 2a TN5ea

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/ a

- WNBa HX3e-N aWH5ea pUW-23e-B 35aBHx5ea BpaB-N
WBH N UN -Ba-WU 1-35WH-aV5ea53W H 2 a 2aW5e-N
W/NX3-N5

a HN2 W/N ea 1HfANU2U 1-35HX5ea BH35HN-aV5ea53WUW
2aW5e-NW/NX3-N5

e BH N -5aBRa3e-B a M3U5aW

, S4 BH35HlaB 5UNW H 2 B/W2UN- 2aW5e-NW/NX3-N5
U 1-35WH-aV5ea53W-5-N UN5ea pUUN5 HX/ BH N -5aBWB-IUN
/ BH N W

- HfANU2T 1-35 ea BH353H 2 e-pa - Na/-5pa U 1-35HN
-aV5ea53W-BH N / BH N -5aBWB-IUN / BH N W ea 1HfANU2
U 1-35WH5ea BH35HN-aV5ea53W-5-N UN5ea pUUN5 HX
BH N -5aB41Ba-IUN / BH N W-Ba IUN Wai UN5ea BXS TR -5
1-/a

T 1-35 BHBH U/-5UN aW5e-NW/NX3-N5

3 U/-5UN a-WBa H U/-5UN a-WBa UBa UaI XB5eW
1HfANU2U 1-35 a3- W 5ea U 1-35W H 2 a 2aW5e-N
W/NX3-N5

I MN UN W, N aBHx/ BH N -5aBRa3e-B a X3U5aWWB-IUN
-W/W H 2 a 5UaI 5e U 12a aN5-5UNHX5ea BH35
H apaB-WaVBUaI UNW3UN 5eaW X3U5aW H 2 a
HlaB 5aI 5eUNeV5H3 W 1-B a5aBW-N 5ea pUW-23e-B 35aBHx
5ea -W/W H 2 N53e-N a eaBxBa U 1-35WH-aV5ea53WUN
5eaW -Ba-W H 2 a 2aW5e-NW/NX3-N5

a HN2 W/N ea 1HfANU2U 1-35HX5ea BH35HN-aV5ea53WUW
2aW5e-NW/NX3-N5

K. Hazardous Materials and Groundwater Contamination

BHa35 HNSB 35UN

- 4apaN - W - -N RaWpHUB HNSB 35UN, Ba-

BHa353H 2 3Ba-5a - WNUX-N5e- -B SHaNPUBH aN5
5eBH /e BH 5UNa SBNWHE5 W -N IUWHW2HXe- -B H W -5aB2WN
-Va WI I BN /BIUN -N 3HNSB 35UN 4 3e e- -B W3H 2 HB3 B
5eBH /e 1W5-N -33UaNS3HN 5UNWUNpHqUV 5ea Ba2- W HX
3HNSB 35UNa U aN5 Ba2-5aI e- -B H W -5aB2WUNSH5ea aNPUBH aN5

- HANSU2T 1-35 ea BHa353H 2 3Ba-5a - e- -B SH5ea
aNPUBH aN55eBH /e 5ea SBNWHE5 W -N IUWHW2HXe- -B H W
-5aB2WN -Va WI I BN /BIUN -N 3HNSB 35UN ea
1HANSU2U 1-35WHX5ea BHa35Ba2-5aI 5He- -B H W -5aB2WUN
5ea 4apaN - W - -N RaWpHUB HNSB 35UN, Ba- -Ba
IUV WI UN5ea BXSSTR -51-/aW -N

T 1-35 BHB5H 5U-5UN HANSU2 WNUX-N5

3 5U-5UN a-WBa ea BHa35 U2UNBHEHB 5a 5U-5UN
a-WBaW , -N , UN4a35UN
HX5ea BXSSTR eUe U2aNWBa 5e-5 Nug aVaBN
U2IUBa355ea 3HNSB 35HB5H -W H 53HNBa5a SB 3 WUN-
IaWUN-5aI -Ba- eaBa 5ea -5aB23-NN5B NHXUNSH- VBa- HB
1aBH2-5a UNH5ea /BH N -5aB eUW Ba- U2 a Wa3UXaI HN-22
-1123- 2a 3HNSB 35UN12-NW-N a UN12-3a aXBa -N 3HNBa5a UV
1H BaI Nug aVaBN U2IUBa355ea 3HNSB 35HB5H WpUa
3HNSB 35UNpaeU2aWUN- -N NaB5e-53HN5 UNW2 U WW3e -W
2 B3-N5W UeUN-NU 1aBpUH W-Ba- SH-pHU WU2Ba2-5aI -5aB
-25 U 1-35W Nug aVaBN U2IUBa355ea 3HNSB 35HB5HUNWa35
-N -WNa3aWVB WpUa -2a U aN5 aXBa U5aN5aB5ea
3HNSB 35UNW5a Nug aVaBN U2-2MIUBa355ea 3HNSB 35HB5H
UNWa35-N WpUa -2a U aN5Ba/ 2B2 5eaBa-XaB-N aXBa
HBUN U aI U5a2 -I -3aN5SH5ea 4, R HB-N H5eaBI BUN/a HB
3Ba SH-pHU a U aN52a- Ba2-5aI -5aB -25 U 1-35W
Nug aVaBN U2IUBa355ea 3HNSB 35HB5H Ba1-UB-N 2a- W-N
Ba1-UB-N eHNaW-N X5UN W5e-5-Ba UN1HNB3HN 5UN aXBa
a/UNUN HB 5eaB a-WBaW U2aNWBa 5e-5 Nug aVaBN
U2IUBa355ea 3HNSB 35HB5H1Ba1-Ba - WU21BapaNSUN-N
3HN5-UN aN512-N1BHB5Ha U aN5 W HN5ea W5a
Nug aVaBN U2IUBa355ea 3HNSB 35HB5HX2H 5eUM2-NI BN
BHa353HNSB 35UNSH1BapaN5 WU2Ba2-5aI -5aB -25 U 1-35W
ea 12-N U2UNB2 Ia 5NF5 a 2U 5aI SH - Wa3UX3 aB aI
a U aN5 -UN5aN-N5a -N BaXa2UN -Ba-W aB aI -N UNaI
e- -B H W -5aB2WB/a -Ba-WN W5a 5e-5-Ba 3HpaBaI I BN 5ea

MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

BUN W-WN 3 e- -B H W -5aB2WU232a-N 1 a U aN5HN
W5a W3e -W WB aN51-I WWHpa2W-N -/ WSH3HN5 UN
3HN5 UN 5aI WU2 -N I HB aBWB UNaI UN5ea 2B-5UN-N W
HX32a-N 1 a U aN5

I MNUV W T 12a aN5 5UNHX , , -N
 , H 2 BaI 3a 5ea -2a-I 2H 1HaNUJ2XB-33UaN5-2WU2W
HB2a- WHX1H2 5-N5WW3e -WXa2W2 B3-N5W-N e I B 23 X U
I BN a U aN5H1aB 5UN BaXa2UW HB -UNaN-NBa RaI 3UN
5ea 1HaNUJ2XB -5aB -25 U 1-35W2-5aI 5HWU2WB2a- W
H 2 BaI 3a 5ea 2apa2HX5eUWU 1-35 a2H 5ea WNUX3-NBa
5eBaWHI , N Ba -UNU U 1-35W U2 a 2aW5e-NWNUX3-N5

a HN2 WUN ea 1HaNUJ2U 1-35HX5ea BHa35Ba2-5aI 5H
e- -B H W -5aB2WUN5ea 4apaN - W - -N RaWpHB
HN5B 35UN, Ba- U2aW5e-NWNUX3-N5

4-N5 , N RpaB HN5B 35UN, Ba-

, BHa353H 2 3Ba-5a - WNUX3-N5e- -B 5HaNpUBHN aN5
5eBH /e BH 5UNa 5BNWH5 W -N I UWHW2HXe- -B H W -5aB2W-N
-W5a W I BN /B I UN -N 3HN5B 35UN 4 3e e- -B W3H 2 HB3 B
5eBH /e 1W5-N -33UaN53HN 5UNWUNpHpUN 5ea Ba2a- W HX
3HN5B 35UNa U aN5 Ba2-5aI e- -B H W -5aB2WUN5ea aNpUBHN aN5

- HaNUJ2T 1-35 ea BHa353H 2 3Ba-5a - e- -B 5H5ea
aNpUBHN aN55eBH /e 5ea 5BNWH5 W -N I UWHW2HXe- -B H W
-5aB2W-N -W5a W I BN /B I UN -N 3HN5B 35UN ea
1HaNUJ2U 1-35W5X5ea BHa35Ba2-5aI 5He- -B H W -5aB2WUN
5ea 4-N5 , N RpaB HN5B 35UN, Ba- Ba I U5 W I UN5ea B X
STR -51-/a

T 1-35 BUBSH UJ-5UN HaNUJ2 WNUX3-N5

3 UJ-5UN a-WBa ea BHa35 U2UNBHEHB 5a UJ-5UN
a-WBaW , , -N , UN4a35UN
HX5ea B XSTR eUe U2aNWBa 5e-5 NUG aW5aBN
U2I Ua355ea 3HN5B 35B5H -W H 53HN5Ba5a 5B 3 WUN-
IaWUN-5aI -Ba- eaBa 5ea -5aB23-NN5B NHXUN5H- W5a- HB
1aBH2-5a UNH5ea /BH N -5aB eUW-Ba- U2 a Wa3UXaI HN-22
-1123- 2a 3HN5B 35UN12-NW-N a UN12-3a aXBa -N 3HN5Ba5a UW
1H BaI NUG aW5aBN U2I Ua355ea 3HN5B 35B5H WpUa
3HN5B 35UNpaeU2aWUN- -N NaB5e-53HN5 UNW2 U WW3e -W
2 B3-N5W UeUN-NU 1aBpUH W-Ba- 5H-pHU WU2 Ba2-5aI -5aB
-25 U 1-35W NUG aW5aBN U2I Ua355ea 3HN5B 35B5H UNWa35
-N -WNa3aWB WpUa-22a U aN5 aXBa U5aN5aB5ea
3HN5B 35UN W5a TNWa35UN-N Na3aWB WpUa U2 a -Ia

MNUV WSTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

Ba/ 2E 5eaBa-XaB-NI aXBa HB UN U aIU5a2 -I -3aN5SH
5ea 4, R HB-N H5eaBIB UN/a HB3Ba SH-pHU a U aN52a-
Ba2 5aI -5aB -25 U 1-35W NUg aV5aBN U2IUBa355ea
3HNSB 35HB5HBa1-UB-N 2a- W-N Ba1-UB-N eH5aW-N X55UN W5e-5
-Ba UN1HB3HN 5UN aXBa a/ UNUN HB 5eaB a-WBa W U2
aNWBa 5e-5 NUg aV5aBN U2IUBa355ea 3HNSB 35HB5HBa1-Ba -
WU2IUBa355ea-NI 3HN5-UN aN512-N1BIB5Ha U aN5 W HN
5ea W5a NUg aV5aBN U2IUBa355ea 3HNSB 35HB5HX2H 5eUW
12-NI BN BHa353HNSB 35UN5H1BapaN5WU2Ba2 5aI -5aB
-25 U 1-35W ea 12-N U2UN82 Ia 5N5 a 2U 5aI 5H -
Wa3UX3 aB aI a U aN5 -UN5aN-NBa -NI BaXa2UN -Ba-W
aB aI -NI 2NaI e- -B H W -5aB2W5HB/a -Ba- WNW5a 5e-5-Ba
3HpaBaI I BN 5ea B UN W-WN 3 e- -B H W -5aB2WU2
32a-N 1 a U aN5HNW5a W3e -W WB aN51-I WWHpa2W-N
-/ W5H3HN5-UN3HN5-UN 5aI WU2 -NI I HB aB5B UNaI UN5ea
2B-5UN-N W HX32a-N 1 a U aN5

I MN UN W T 12a aN5 5UNHX , , -N
 , H 2 BaI 3a 5ea -2a-I 2H 1H5aN5U2XB-33UaN5-2WU2W
HB2a- W5X1H2 5-N5WW3e -WXa2W2 B3-N5W-NI e I B 23 X U
I BN a U aN5H1aB 5UN BaXa2UN HB -UN5aN-NBa RaI 3UN
5ea 1H5aN5U2XB- -B H W -5aB2WU2WU2Ba2 5aI -NI 2a- Ba2 5aI
-5aB -25 U 1-35W H 2 BaI 3a 5ea 2apa2HX5eUWU 1-35 a2H
5ea WUNX3-NBa 5eBaWHI , N Ba -UNUN U 1-35W U2 a 2aW
5e-NWUNX3-N5

a HN2 W5IN ea 1H5aN5U2U 1-35HX5ea BHa35HNa UW5HNWUN
5ea 4-N5 , N R5paB HNSB 35UN, Ba- UW2aW5e-NWUNX3-N5

3 apU2 -N HN HNSB 35UN, Ba-

, BHa353H 2 3Ba-5a - WUNX3-N5e- -B 5HaNpUBN aN5
5eBH /e BH 5UNa 5BNW5B5 W -NI I UWHW2HXe- -B H W -5aB2W-N
-W5a W5I I BN /BI UN -NI 3HNSB 35UN 4 3e e- -B W3H 2 HB3 B
5eBH /e 1W5-NI -33UaN53HN 5UNWUNpH2pUN 5ea Ba2a- W HX
3HNSB 35UNa U aN5 Ba2 5aI e- -B H W -5aB2WUN5H5ea aNpUBN aN5

- H5aN5U2T 1-35 ea BHa353H 2 3Ba-5a - e- -B 5H5ea
aNpUBN aN55eBH /e 5ea 5BNW5B5 W -NI I UWHW2HXe- -B H W
-5aB2W-N -W5a W5I I BN /BI UN -NI 3HNSB 35UN ea
1H5aN5U2U 1-35W5HX5ea BHa35Ba2 5aI 5He- -B H W -5aB2WUN
5ea apU2 -N HN HNSB 35UN, Ba- -Ba I U5W W5I UN5ea B X5STR
-51-/a

T 1-35 B5HB5H 5U-5UN H5aN5U2 WUNX3-N5

3 5U-5UN a-WBa ea BHa35 U2UN8H5HB 5a 5U-5UN

MN UN WE STR XB4-N5 , N R5paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a-WB W , -N , UN4a35UN
HX5ea B XSTR eUe U2aNBW 5e-5 Nug aVBN
U2I Ua355ea 3HNB 3FBSH -W H 53HNB5a SB 3 WUN-
IaWUN-5aI -Ba- eaBa 5ea -5aB 23-NN5B NHXUNH- VBa- HB
1aBH2 5a UNH5ea / BH NI -5aB eUW-Ba- U2 a Wa3UaI HN-22
-1123- 2a 3HNB 35UN12-NW-NI a UN12-3a aXB -N 3HNB5a UW
1H BaI Nug aVBN U2I Ua355ea 3HNB 3FBSH WpUa
3HNB 35UNpaeU2aWUN- -NaB5e-53HN5 UNW2 U WW3e -W
2 B3-N5W UeUN-NU 1aBpUH W-Ba- 5H-pHU WU2 Ba2-5aI -5aB
-25 U 1-35W Nug aVBN U2I Ua355ea 3HNB 3FBSH UNWa35
-N -WNa3aWB WpUa-2a U aN5 aXB UaNaBaW5ea
3HNB 35UNW5a TNWa35UN-NI WpUa U2HB3 Ba/ 2B
5eaBa-XaB-NI aXB HB UN U aI U5a2 -I -3aN5SH5ea 4, R HB
-N H5eaBI B UN/a HB3Ba 5H-pHU a U aN52a- Ba2-5aI -5aB
-25 U 1-35W Nug aVBN U2I Ua355ea 3HNB 3FBSH Ba1-UB
-N 2a- W-N Ba1-UB-N eHW-W-N X5UN W5e-5-Ba UN1HB
3HN UN aXB a/ UNUNV HB 5eaB a-WB W U2aNBW 5e-5
Nug aVBN U2I Ua355ea 3HNB 3FBSH Ba1-Ba -WU2
1BapaNSUN-NI 3HN5 UN aN512-N1BFB5Ha U aN5 W HN5ea
W5a Nug aVBN U2I Ua355ea 3HNB 3FBSH X2H 5eUW2-N
I BV Ba353HNB 35UNSH1BapaN5WU2 Ba2-5aI -5aB -25
U 1-35W ea 12-N U2NB2 Ia 5N5 a 2U 5aI 5H - Wa3U3
aB aI a U aN5 -UN5aN-NBa -NI BaXa2UN -Ba-W aB aI
-NI 2NaI e- -BH W -5aB 2WB/a -Ba-WN W5a 5e-5-Ba 3HpaBaI
I BV 5ea B UN W-WN 3 e- -BH W -5aB 2WU232a-N 1
a U aN5HNW5a W3e -W WB aN51-I WWHpa2W-NI -/ WSH
3HN5 UN3HN5 UN-5aI WU2 -NI I HB aBWSB UNaI UN5ea 2B-5UN
-NI W HX32a-N 1 a U aN5

I MN UN W T 12a aN5 5UNHX , -N
H 2 BaI 3a 5ea -2a-I 2H 1H5aN5U2XB-33UaN5-2WU2W
HB2a- WHX1H2 5-N5WW3e -WXa2W2 B3-N5W-NI e IB 23 X2 U
I BV a U aN5H1aB 5UN BaXa2UN HB -UN5aN-NBa RaI 3UN
5ea 1H5aN5U2XBe- -BH W -5aB 2WWU2 Ba2-5aI -NI 2a- Ba2-5aI
-5aB -25 U 1-35W H 2 BaI 3a 5ea 2apa2HX5eUWU 1-35 a2H
5ea W/NX3-NBa 5eBaWHI , N Ba -UNUNV U 1-35W U2 a 2aW
5e-NW/NX3-N5

a HN2 WUN ea 1H5aN5U2U 1-35HX5ea BH a35 Ba2-5aI 5H
e- -BH W -5aB 2WUN5ea apU2 -N HN HNB 35UN, Ba- UWaW
5e-NW/NX3-N5

I 52a Ba HNB 35UN, Ba-

BHa353H 2 3Ba-5a -W/NX3-N5e- -B 5HaNpUBN aN5
5eBH /e BH 5Na SB NWH5 W -NI UWHW2HXe- -BH W -5aB 2W-N
-V5a WI I BV /BI UN -NI 3HNB 35UN 4 3e e- -B W3H 2 HB3 B
MN UN WESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be
Tg S4 SR S T T -/a

5eBH / e 1W5-N -33Ua53HN I5UHNW0pH2pUV 5ea Ba2- W HX
3HN5B 35UfNa U aN5 Ba2-5aI e- -B H W -5aBj2W0N5H5ea aNpUBHN aN5

- H5aNSU2T 1-35 ea BH5a353H 2 3Ba-5a- e- -B 5H5ea
aNpUBHN aN55eBH / e 5ea 5BNWHE5 W-N I UWHW2HXe- -B H W
-5aBj2W-N -5a W I I BN / B I UV -N 3HN5B 35UfN ea
1H5aNSU2U 1-35WHX5ea BH5a35Ba2-5aI 5He- -B H W -5aBj2W0N
5ea 5a Ba HN5B 35UfN, Ba- -Ba I UV W I UN5ea B XSTR
-51-/a

T 1-35 BH5B5H UU-5UfN H5aNSU22 W0N03-N5

3 UU-5UfN a-WBa ea BH5a35 U2UN3HEI HB 5a UU-5UfN
a-WBaW , -N , UN4a35UfN
HX5ea B XSTR eUe U2aNWBa 5e-5 Nug a5aBN
U2I Ua355ea 3HN5B 35fB5H -W H 53HN5Ba5a 5B 3 W0N-
IaW0N-5aI -Ba- eaBa 5ea -5aBj23-NN5B NHXUNSH- 5Ba- HB
1aBH2-5a UN5H5ea / BH N -5aB eUW-Ba- U2 a Wa3UaI HN-22
-1123- 2a 3HN5B 35UfN12-NW-N a UN12-3a aXBa -N 3HN5Ba5a UV
1H BaI Nug a5aBN U2I Ua355ea 3HN5B 35fB5H WpUa
3HN5B 35UfNpaeU2aW0N- -N5aB5e-53HN5 UNW2 U WW3e -W
2 B3-N5W UeUN-NU 1aBpUH W-Ba- 5H-pHU WU2Ba2-5aI -5aB
-25 U 1-35W Nug a5aBN U2I Ua355ea 3HN5B 35fB5HUNWa35
-N -WNa3aWB WpUa-2a U aN5 aXBa UaNaBaW5ea
3HN5B 35UfNW5a -N Ba / 2-B2 5eaBa-XaB-N aXBa HB UN
U alU5a2 -I -3aN55H5ea 4, R HB-N H5eaBI B UN / a HB3Ba 5H
-pHU a U aN52a- Ba2-5aI -5aB -25 U 1-35W
Nug a5aBN U2I Ua355ea 3HN5B 35fB5H Ba1-UB-N 2a- W-N
Ba1-UB-N eH5aW-N X5UN W5e-5-Ba UN1H5B3HN5UfN aXBa
a/UNNUN HB 5eaB a-WBaW U2aNWBa 5e-5 Nug a5aBN
U2I Ua355ea 3HN5B 35fB5H1Ba1-Ba - WU21Bap5UfN-N
3HN5-UN aN512-N1BfB5Ha U aN5 W HN5ea W5a
Nug a5aBN U2I Ua355ea 3HN5B 35fB5HX2H 5eUW2-NI BN
BH5a353HN5B 35UfN5H1Bap5WU2Ba2-5aI -5aB -25 U 1-35W
ea12-N U2UN2 Ia 5NH5 a2U UaI 5H - Wa3U03 aB al
a U aN5 -UN5aN-N5a -N BaXa2UN -Ba- W aB al -N 2UNaI
e- -B H W -5aBj2WfB/a -Ba-WN W5a 5e-5-Ba 3HpaBaI I BN 5ea
B UN W-WN 3 e- -B H W -5aBj2WU232a-N 1a U aN5HN
W5a W3e -W WB aN51-I WWHpa2W-N - / W5H3HN5-UN
3HN5-UN-5aI WU2 -N I HB aBWB UNaI UN5ea 2B-5UfN-N W
HX32a-N 1a U aN5

I MN UN W T 12a aN5-5UfNHX , -N
, H 2 BaI 3a 5ea -2Ba-I 2H 1H5aNSU2XB-33Ua5N5-2WU2W
HB2a- WHX1H2 5-N5WW3e -WXa2W2 B3-N5W-N e I B 23 X2 U
I BN a U aN5H1aB 5UfN BaXa2UN HB -UN5aN-N5a RaI 3UN
5ea 1H5aNSU2XBe- -B H W -5aBj2WWU2Ba2-5aI -N 2a- Ba2-5aI
MN UN WE STR XB4-N5 , N RfpaBg -5aBRUe5, 1123-5UfNW
-Be
Tg S4 SR S T T -/a

- 5aB - 25 U 1-35W H 2 Ba 3a 5a 2apa2HX5eUWU 1-35 a2H
5ea W/NX3-N5 5eBaWHI , N Ba -UNU U 1-35W U2 a 2aW
5e-NW/NX3-N5

a HN2 WIN ea 1HaNU2U 1-35HX5ea BH35Ba2 5aI SH
e- -B H W -5aB2WON5ea 5a Ba HNSB 35UN, Ba- U2aW
5e-NW/NX3-N5

L. Public Services, Utilities, and Transportation

BHa35 HNSB 35UN

- 4apaN - W - -N RaWpHUB HNSB 35UN, Ba-

4 HNSB 35UNUN5ea 4apaN - W - -N RaWpHUB, Ba- H 2
BaW5UN- UNBpH2 a HX3HNSB 35UNIa BW

- HaNU2T 1-35 ea BH353H 2 1BH 3a 3HNSB 35UNIa BW
ea 1HaNU2U 1-35WHX5ea BH35Ba2 5aI SHWZU -Va
/aNab 5aI I BN 3HNSB 35UN-Ba IUV Wai HN1-/aW -N
HX5ea BXSSTR

T 1-35 BHBSH UJ-5UN aW5e-NW/NX3-N5

3 UJ-5UN a-WBa H UJ-5UNUBa UB1 XB5eUMHaNU2
U 1-35 a3- W5ea U 1-35WB2 5aI SHWZU -Va H 2 a 2aW
5e-NW/NX3-N5

I MNUVW eaBa U2 a Wl a pH2 a HXWZU -Va W3e -W
WU1UN 3-BHNW/BN B1 Wl SHW3 Ba 3-BHNW-NI W -22
Ua WW3e -W3B1 Va2 W3B1 1Ua W3B1 2 aB-N 12 HH
1Ua 3H-UN 5-1a -N 2 Nbe SB W /aNab 5aI I BN 3HNSB 35UN
TN5eU3HNSB 35UN-Ba- WZU -Va /aNab 5UNUWVU -5aI SH a
NH HB 5e-N 3 U -B W3 1aB aa HBHN 3 UN eUW
-Va /aNab 5UN H 2 a UeUN5ea 1aB U5aI 3-1-3U5 HX2B-2
WZU -Va X3U5aW MBa - 12a 5ea H2FN -N X22-2Hn 3-N
-33a15 1 SH 3 I- HNSB 35UNHX5ea BH35 H 2
/aNab 5aI a BXBH Ia H25UN-NI Ba3HNSB 35UNHX5ea SB W
B3 HX5ea UN5- a VB 35 Ba 5eUWpH2 a H 2 a UNU -2
g eUa W V-NU2- H N5WHXWU2 -5aB2 H 2 a /aNab 5aI
I BN Ba-2UN aN5HXg -B 41BN W -N HNRH-I 5eUWU2 H 2
a Wl -WX22 eaBa Na3aWB -N -N Ba -UNU WU2 H 2 a
W-5aBaI -2H 5ea BH-I - B5eaB5e-NI a1HWaI UN- 2-N X22
eaBaXB U 1-35W H 2 a 2aW5e-NW/NX3-N5-N NH UJ-5UN
UBa UB1

a HN2 WIN ea 1HaNU2U 1-35HX5ea BH35HN5ea pH2 a HX

MNUV WESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3HNSB 3SUN1 a BWOWaWWe-NW/NX3-N5

4 HNSB 3SUNUN4apaN - W - -N RaWpHUB, Ba- H 2 eUN aB -33aWpU 1Wba- BH IWH4 S 4-N5 , N RtpaBX3U5aW

- HANSU2T 1-35 ea BHa353H 2 eUN aB-33aWpU 1Wba- BH IWH4 S 4-N5 , N RtpaBX3U5aW ea 1HANSU2U 1-35WX 5ea BHa35HN-33aWpU 5ea 1Wba- BH IWH4 S 4, R X3U5aW -Ba IUW WI HN1-/a HX5ea BXSSTR

T 1-35 BHBSH UJ-SUN aWWe-NW/NX3-N5

3 UJ-SUN a-WBa H UJ-SUNUBa UBI XB5eUM HANSU2 U 1-35 a3- W 5ea U 1-35Wba2-5aI 5H-33aWW H 2 a 2aWWe-NW/NX3-N5

I MNUV W HNSB 3SUNUN5ea 4apaN - W - -N RaWpHUB, Ba- H 2 eUN aB-33aWpU 5ea 1Wba- BH IWH4 S 4, R X3U5aW BaW2UN UN-N-IpaBW 52aWWe-NW/NX3-N5U 1-35 Ra-2/UNV g -B 41BN W -N HNRH-I 3H 2 5- a 1 5H HNeWI BW e3e 5pa23H 2 a WH al HBapaN1aBH U-22 2B al I a 5H 5ea 1BaWNa HX3HNSB 3SUNa U aN5 4 S WWa HlaB 5BW W 5ea W BH IWHN- I-U2 -WW H-pHU aNBH NaBN 3HNSB 3SUN pae32aW5 - a Na3aWwB XB4 S HlaB 5BWH-11BH 3e 4, R e I Ba2a35B3 X3U5aW5H 45-5a Ue - B 5eaB5e-NXH BaNWHRH-I eUW-IIW-11BH U -5a2 UaWH5ea IUW Na 5e-5 W a 5pa2aI -N 1 5H UN 5aWH-33aWw4, R ea BH I 1BpUUN 1Wba- -33aWwWN5HlaN5H5ea 1 23 T5UW -2 HNa 32 Wpa2 WI 4 S 1aBWN25Ba-3e e I BH I H aB X3U5aW 1Wba- HX4apaN - W - eaBaXBa eUa-IpaBW 5eUWw 2aWWe-NW/NX3-N5U 1-35-N NH UJ-SUNUBa UBI

a HN2 WIN ea 1HANSU2U 1-35HX5ea BHa35HN-33aW5H4 S 4-N5 , N RtpaBX3U5aWOWaWWe-NW/NX3-N5

4 HNSB 3SUNUN4apaN - W - -N RaWpHUB, Ba- 3H 2 3HNSU 5a 1 5H I-U2 5BJW-W a-WBa UN1-WaNaB3-Ba tp-2aN5W 5H5ea WBBH NUW Wba5Na5 HB

- HANSU2T 1-35 ea BHa353H 2 3HNSU 5a 5HI-U2 pae32a 5BJW-BH NI 5ea 4apaN - W - -N RaWpHUB, Ba- ea 1HANSU2U 1-35WX5ea BHa35HN5B X3 HN5ea WBBH NUW Wba5 Na5 HB -Ba IUW WI HN1-/a HX5ea BXSSTR

T 1-35 BHBSH UJ-SUN aWWe-NW/NX3-N5

3 UJ-SUN a-WBa H UJ-SUNUBa UBI XB5eUM HANSU2

U 1-35 a3- W 5ea U 1-35W2-5aI 5H3X3 H 2 a 2aW5e-N
W/NX3-N5

I MN UN W HNSB 35UNUN 5ea 4apaN - W - -N RaWpHUB, Ba-
3H 2 3HNSU 5a 1 5H I-U2 SBIW-W a-WBaI UN1-WaN aB
3-Ba p-2aN5W5H5ea WBH NI UN W5a5Na5 HB BN
3HNSB 35UN-35pUaWUN 5ea 4apaN - W - -N RaWpHUB, Ba-
1 5H 3HNSB 35UN HB aBW H 2 -Bpa -55ea W5a aXBa 5ea
W5HXa-3e WUS , -N Ia1-B5-55ea aNI HXa-3e WUS
, II UN-2 1 5H Ia2paBaW3HNSB 35UN
-5aB2W3H 2 HB3 Ba-3e I- 5UMHWU2a 5e-53HNSB 35UNUN
5ea 4apaN - W - -N RaWpHUB3H 2 HpaB1 5e
3HNSB 35UNHX e-W THX5ea 2 Na HE2 Ua2Na TX5eWHPaB1
HB3 BaI 1 5H -II UN-23HNSB 35UN HB aBW H 2 a
-BpUN -N Ia1-BUN XBa-3e 3HNSB 35UNWUS -N 1 5H
SB3 SBIW H 2 a Naalal 5H Hpa WU2 -5aB2UX-BB WBaNaB
-WN5 WI UN5ea 4, R HNSB 35UN, Ba- H2 XI BSB3 SBIW
laBI- H 2 a -N3U-5aI UX-BB WBaNaB aBa WI
HNSB 35UNSB3 W H 2 a Weal 2aI 5H-pHU la- eH BWX
BH I - SBX3 XH 5H - -N XH 5H 1
, WW UN -NapaNIUSBU 5UNHXSB3 W5eH/e 5ea Ba -UNUN
eH BWX5ea I- 5eaBa H 2 a 1 5HaUe5SB3 SBIWLaBeH BUX-
BB WBaNaBUW WI -N SB3 SBIWLaBeH B 5eH 5- BB
WBaNaB TN-33H NUN XBSX3 pH2 a a-3e SB3 UW-WW al
5H a 3H 1-B 2a 5H- H 55 H3-BW1a-3e SB3 SBI UW3H NaI -W
5 H1-WaN aB3-Ba p-2aN5W BXX3-IIal 5ea BHa35 H 2
a UNBI BN 5ea la- eH BW-N a22 5eUN5ea 3-1-3U5 HX5ea
BH I - TNW 5ea -II UNHX BHa35HNSB 35UNSBX3 H 2
N5 a W W5NU23H 1-BaI 5H5ea a UNUN SBX3 2HI -N
3-1-3U5 HX5ea W5a5W5a 5eUW H 2 a - 2aW5e-NW/NX3-N5
U 1-35 -N NH 5U-5UNUWa UaI

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNI-U2 SBIWHN
5ea WBH NI UN W5a5Na5 HB U2aW5e-NW/NX3-N5

4-N5 , N RpaB HNSB 35UN, Ba-

4 HNSB 35UNHX e-W THX5ea 2 Na HE2 Ua2Na -N H a
MH HNa35HB3H 2 BaW5UNIUB 15UNHX -5aBW112aWXBH 5ea
2 Na HE2 1-WW

- HaNU2T 1-35 ea BHa353H 2 BaW5UNIUB 15UNHX -5aB
W112aWXBH 5ea 2 Na HE2 -WW ea 1HaNU2U 1-35WHX
5ea BHa35HN -5aBW112aWXBH 5ea 2 Na HE2 -WW Ba
IUS WAI UN5ea BXS TR -51-/a

T 1-35 BUBSH 5U-5UN HaNU2 W/NX3-N5

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3 UJ-5UN a-WB ea BH35 UUNBHEHB 5a UJ-5UN
a-WB 4 UN4a3UN HX5a BXSIR eUe
UaNB 5e-5I BN 3HNB 3UN NUG aVBN U-BN a SH
WX3UaWX5a 4-N5, N RpaB U Ba HlaB 5pa g -5aB
BH35, /Ba aN5H - aIa2paBaWH2B-2 WB5e-5 H 2
HeaB U Ba3apa -5aBH 5a 2 Na HE -W Ua2Na TX
a 3e-N a 3-NH5B12-3a IUB 15aI Ia2paB NUG aVBN U
XBW 4g -5aB-W B12-3a aN5W112

I MNUNW ea U 12a aN5-5UNHX 4 UaNB
3HUN -5UNHX -5aBIa2paBaW-N BI 3a U 1-35W-WBU5aI
Ue IUB 15UNHX5a 2 Na HE -W Ua2Na I BN
3HNB 3UNHX e-W TTHX5a 2 Na HE Ua2Na -N H
MH HNa3HB-N BI 3a 5eUW 1-35H2aW5e-NWUNX3-N5
, N Ba -UNU U 1-35W U a 2aW5e-NWUNX3-N5

a HN2 UN ea HFaNU2U 1-35HX5a BH35HN -5aBW112aW
XH 5a 2 Na HE -WU2aW5e-NWUNX3-N5

4 HNB 3UNHX e-W TTHX5a 2 Na HE Ua2Na 3H 2 B W5
UNIUB 15UNHX -5aBW112aWXH 5a 4 S RpaB BWN
1Ua2Na H5e MB Ua2Na

- HFaNU2T 1-35 ea BH353H 2 B W5UNIUB 15UNHX -5aB
W112aWXH 5a 4 S RpaB BWN 1Ua2Na H5e MB
Ua2Na ea HFaNU2U 1-35WX5a BH35HN -5aBW112aW
XH 5a 4 S RpaB BWN Ua2Na H5e MB Ua2Na -Ba
IUB WAI UN5a BXSIR -51-/a

T 1-35 BHBH UJ-5UN HFaNU2 WUNX3-N5

3 UJ-5UN a-WB ea BH35 UUNBHEHB 5a UJ-5UN
a-WB 4 UN4a3UN HX5a BXSIR eUe
UaNB 5e-5I BN 3HNB 3UN NUG aVBN U-BN a SH
WX3UaWX5a 4-N5, N RpaB U Ba HlaB 5pa g -5aB
BH35, /Ba aN5H - aIa2paBaWH WB5e-5 H 2
HeaB U Ba3apa -5aBpU 5a 4 S RpaB BWN H5e MB
-N2 ea -Xa35aI W35UNWX5a 4 S RpaB BWN H5e
MB -N2 U a B12-3aI UN UN -XaB3HNB 3UN TXa 3e-N a
3-NH5B12-3a IUB 15aI Ia2paB NUG aVBN UXBW 4g
-5aB-W B12-3a aN5W112

I MNUNW, 2eH /e U - a 1HW2a SHW11H5 5a 4 S RpaB
BWN Ua2Na H5e MB -N2-N a 3-p-5a NaBa-5e UX5
a3H aWNa3aWB 5a 4 S RpaB BWN H5e MB -N2 U
a 5 aNH 5HXWpUa XB H5eW BN 3HNB 3UNHX5a
2 Na HE Ua2Na e-W TIT ea U 12a aN5-5UNHX 4

MNUNWESTR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

UaNBa 5a 3HNSUN -SUNHX -5aBIa2paBaWN BI 3a U 1-35W
Ba2 5aI SHIUB 15UNHX5a 4 S RpaB BHWV H5e MB -N2
I BN 3HNSB 35UNHX e-W THX5a 2 Na H2 Ua2Na , N
Ba -UNU U 1-35W U a 2aW5e-NWUNX3-N5

a HN2 WJN ea 1H5aNSU2U 1-35HX5a BH35HN -5aBW112aW
XH 5a 4 S RpaB BHWV Ua2Na H5e MB -N2U2aW
5e-NWUNX3-N5

4 HNSB 35UNHX e-W THX5a 2 Na H2 Ua2Na 3H 2 BaW25UN
IUB 15UNHX -5aBW112aWXH 5a H5e MB -N2

- H5aNSU2T 1-35 ea BH353H 2 BaW25UNIUB 15UNHX -5aB
W112aWXH 5a H5e MB -N2 ea 1H5aNSU2U 1-35HX5a
1BH35HN5a -5aBW112aWXH 5a H5e MB -N2-Ba
IUB WAI UN5a B XSTR -51-/a

T 1-35 BUBSH UJ-SUN H5aNSU2 WUNX3-N5

3 UJ-SUN a-WBa ea BH35 U2UBHEI HB 5a UJ-SUN
a-WBa 4 UN4a35UN HX5a B XSTR e3e
UaNBa 5e-5I BN 3HNSB 35UN NUG aV5aBN U2-BN a SH
WX3U2aWXH5a 4-N5 , N RpaB U2 Ba H1aB5pa g -5aB
BH35, /Ba aN5H - aIa2paBaW5H W5a5e-5 H 2
H5aB U Ba3aPa -5aBpU 5a 4 S RpaB BHWV H5e MB
-N2 ea X35aI W35UNWXH5a 4 S RpaB BHWV H5e
MB -N2 U a Ba123aI UN UN -XaB3HNSB 35UN TXa 3e-N a
3-NN5Ba123a IUB 15aI Ia2paB NUG aV5aBN U2XBOW 4g
-5aB-W Ba123a aN5W112

I MNUV W HNSB 35UNHX e-W THX5a 2 Na H2 Ua2Na U
a2U UN 5a -N-11BI U -5a2 XH5W35UNHX5a H5e MB
-N2 ea 1H5UNHX5a H5e MB -N2-X35aI UW 1Ua2Na
NaBa-5e 5a 4-N5 , N -N HNRHI 5W a 5a BI 5a
3-N2UW NaUNXBal -WNB -N -WW3e UWN5Xa-W2a SH
W11H55a 3-N2I BN 3HNSB 35UN TN-11UNSH5a
UN5aB 15UNUNWpUa 5e-5 H 2 HB3 BI BN H5aB1e-WWX
3HNSB 35UN 5eUMH5UNHX H5e MB -N23H 2 a H 5HX
WpUa XB H5e W BN 3HNSB 35UNHX e-W THX5a 2 Na
H2 Ua2Na aNBWN 3HNSUN -SUNHX -5aBIa2paBaWN aB
4 5a UJ-SUN H 2 BI 3a U 1-35W Ba2 5aI SH5a
IUB 15UNHX5a H5e MB -N2I BN 3HNSB 35UNHX e-W T
HX5a 2 Na H2 Ua2Na SH2aW5e-NWUNX3-N5 , N Ba -UNU
U 1-35W U a 2aW5e-NWUNX3-N5

a HN2 WJN ea 1H5aNSU2U 1-35HX5a BH35HN -5aBW112aW
XH 5a H5e MB -N2I BN 3HNSB 35UNHX e-W THX5a

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

2 N a H E U a 2 N a U W a W W e - N W U N X 3 - N 5

4 H N S B 3 5 U N H X e - W T H X 5 e a 2 N a H E U a 2 N a - N - W B U 5 a I
U 5 a V B 3 5 B a 3 H 2 B a W 2 5 U N I U B 1 5 U N H X - 5 a B W 1 1 2 a W 3 H N p a a I
5 e a H N W B - 5 U N U S B 3 5 - N - 2

- H a N S U 2 T 1 - 3 5 e a B H a 3 5 3 H 2 B a W 2 5 U N I U B 1 5 U N H X - 5 a B
W 1 1 2 a W 3 H N p a a I 5 e a H N W B - 5 U N U S B 3 5 - N - 2 e a
1 H a N S U 2 U 1 - 3 5 W H X 5 e a B H a 3 5 H N - 5 a B W 1 1 2 a W 3 H N p a a I 5 e a
H N W B - 5 U N U S B 3 5 - B a I U W W a I U N 5 e a B X S T R - 5 1 - / a

T 1 - 3 5 B H B S H U U - 5 U N H a N S U 2 W U N X 3 - N 5

3 U U - 5 U N a - W B a e a B H a 3 5 U 2 U N B H H B 5 a U U - 5 U N
a - W B a W 4 - N 4 U N 4 a 3 5 U N H X 5 e a
B X S T R e U e U 2 a N W B a 5 e - 5 I a 2 p a B a W 5 e - 5 H 2 e - p a
H B 3 B a I 5 H 5 e a 4 - N 5 , N R p a B W B a - I U N / B H N W p U 5 e a
H N W B - 5 U N U S B 3 5 - N - 2 U 2 H B 3 B p U a U S U N N U X 3 U 5 a W
, X a B 3 H N S B 3 5 U N 5 e a - X a 3 5 a I W 3 5 U N W H X 5 e a 3 - N - 2 U 2 a
B a 1 2 3 a I U e - N U N U N V B 3 5 B a T N 5 e a - 2 a B N 5 p a 1 - B H X 5 e a
e - W T 2 N a H E U a 2 N a 3 H 2 a W H B a N a I , 5 N n a 2 H 2
a U 5 X H - 1 H U 5 W W I 5 e - N a W H X 5 5 a g a U B a 5 a N U N
W I 5 e a V a B 2 5 e B I / e 5 e a H N 5 - U N W X B - 1 1 B H U - 5 a 2 X a 5
a X B a e H H U N 1 5 H - p - 2 p a V B 3 5 B a - 5 5 e a M H 5 e U 2 U a 2 N a
5 a B U N W e a I a W N a I 3 H N p a - N b a 3 - 1 - 3 U 5 H 2 a 3 X W
5 e H / e 5 e a H I a B 5 U N 3 - 1 - 3 U 5 H 2 a 2 U U a I 5 H 3 X W N S U 2
e - W T H X 5 e a 2 N a H E U a 2 N a - W 3 H 1 2 a 5 a I , 2 U N a N 5 H X
5 e a 2 N a H E U a 2 N a e - W T H 2 5 H 2 - 1 1 B H U - 5 a 2
X a 5 a 5 H 5 e a I U X a B a N 5 2 B - 5 U N H X 5 e a e - W T - 2 U N a N 5 e - W
T H X 5 e a 2 N a H E U a 2 N a H 2 - 2 W I e - p a 5 H a H I U X a I
a B 5 e U W U U - 5 a I - 2 U N a N 5 e - W T H X 5 e a 2 N a H E U a 2 N a
H 2 5 a N a V - B - 3 B H W H B a N B e a B 1 - B H X 5 e a 4 , R
5 e - N H 2 H B 3 B N a B 5 e a B H a 3 5 - N - W B a W 2 5 5 e U W N a
- 2 U N a N 5 H X e - W T H X 5 e a 2 N a H E U a 2 N a H 2 a
- 1 1 B H U - 5 a 2 X a 5 W H B a B 5 e - N N a B 5 e a B H a 3 5 e a H
M H H N a 3 5 H B H 2 B a - U N - W I B H H W I 5 e a B H a 3 5
X a 5 2 H N 5 e H / e U e 5 e a H I U X 3 - 5 U N W 5 H 5 e a 2 N a H E
U a 2 N a 5 e a W 5 H 1 U a W H 2 e - p a - 3 H H N 5 B a N e X B H N 2
- H 5 X a 5 B 5 e a B 5 e - N X a 5 - W H 2 H B 3 B N a B 5 e a
1 B H H W I B H a 3 5 T N - I I U U N 5 e a X H 5 I U a 5 a B 2 N a H E
U a 2 N a H 2 a U W W a - N X H 5 e H B a W H a W - 1 a I 5 N n a 2 5 e a
3 H N S B 3 5 U N H X e U e H 2 2 W 1 5 H - a - B U e 5 e a I B 2 U N
5 - U N - H 5 H N 5 e W - N - 3 X 2 U N - N H e a B H N 5 e W
H N S B 3 5 U N H 2 H B 3 B I - W a B a a e a B H 5 a N a B I a W
2 N W H X 5 e a 4 - N a B N - B U N H - 5 U N - 2 M H a W

M N U N W E S T R X B 4 - N 5 , N R p a B g - 5 a B R U e 5 , 1 1 2 3 - 5 U N W
- B e

T g S 4 S R S T T - / a

I MNI UN W U-5UN a- W W a U 5 a B S H a N W B 3 H S U N - 5 U N H X
- 5 a B I a 2 p a B a W p U a U 5 U N N X 3 U 5 a W H B S H B 2 B - 5 a 5 e - W
T 2 N a H2 Ua2Na 22aI 3a U 1-35WHN -5aBW112aW
3Hpa aI 5ea HNWp-5UN U5B35 -N2 , N B -UNU
U 1-35W 22 a 2aW5e-NW/NX3-N5

a H B 2 W H N ea 1 H a N U 2 U 1-35 H X 5 e a B H a 3 5 H N - 5 a B W 1 1 2 a W
3Hpa aI 5ea HNWp-5UN U5B35 -N2U2aW5e-N
W/NX3-N5

4 H N B 3 5 U N H X H M H H N a 3 5 B 3 H 2 B a W 2 5 U N I U B 1 5 U N H X
-5aBW112aW5H 5ea BaNWH5 Ua2Na XB- W5H51aBH

- H a N U 2 T 1-35 ea B H a 3 5 H 2 B a W 2 5 U N - I U B 1 5 U N H X - 5 a B
W112aW5H 5ea BaNWH5 Ua2Na ea 1HaNU2U 1-35WHX5ea
Ba35HN -5aBW112aW5H 5ea BaNWH5 Ua2Na -Ba
I U5 W5I UN5ea B XSTR -51-/a

T 1-35 B H B S H U - 5 U N a W 5 e - N W / N X 3 - N 5

3 U - 5 U N a - W B H U - 5 U N U W B U B I X B 5 e U M H a N U 2
U 1-35 a3- W 5eaW U 1-35W 22 a 5a 1HB B -N 2aW5e-N
W/NX3-N5

I M N I U N W H N B 3 5 U N H X 5 e a H M H H N a 3 5 B 3 H 2 B a W 2 5 U N
I U B 1 5 U N H X -5aBW112aW5H 5ea BaNWH5 Ua2Na XB-
W5H51aBH BaW2UN UN-N-IpaB 52aW5e-NW/NX3-N5
U 1-35 HNB 35UNHX5ea H MH HNa35B H 2 B Ua -
N5UN Ue 5ea BaNWH5 Ua2Na BN 3HNB 35UN U H 2
a Na3aWB 5HWWaNI W HX5ea BaNWH5 Ua2Na XB
-11BU -5a2 SH aa W a3- W 5ea BaNWH5 Ua2Na UW
WI SH Hpa B/ UN-2 -5aBW112aWUN5aB 15UNHX5ea 1Ua2Na
I HaWN5U aI U5a2 BaW2UNI a3B- WI -5aBI a2paBaW5H
-5aB5a-5 aN512N5WHBI a3B- WI I a2paB HXI BN UN -5aB 5eUW
5a 1HB B WWaNMHNHXH1aB 5UNWU5 1U-2I BN -UNaN-Na
BHBSHI a -5aBN 5ea 1Ua2Na NU H 2 3HHB UN-5a Ue -N
-Xa35aI aN55aW-N 1BpUa aNH /e N53a 1BHBSHW 5H N5H
-2H -Xa35aI aN55aW5HUN5B-W -3 1 W5B/a 5 BNH -3 1
/BH N -5aB1 1W-N HB-BN a XBUN5B- WI I a2paBaW5H
-2aBN-5a WI BaW eUM UB 15UNHX -5aBW112aW H 2 a - 2aW
5e-NW/NX3-N5U 1-35

a H B 2 W H N ea 1 H a N U 2 U 1-35 H X 5 e a B H a 3 5 H N - 5 a B W 1 1 2 a W
XH 5ea BaNWH5 Ua2Na U2aW5e-NW/NX3-N5

4 H N B 3 5 U N H X e - W T H X 5 e a 2 N a H 2 U a 2 N a 3 H 2 B a W 2 5 U N
I U B 1 5 U N H X -5aBW112aW5H 5ea MH5e2MaIaB-N 4-N5 , N RpaB

MNI UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

~~HMW~~ 4, R 1Ua20NaWB- WH51aBH

- HaN5U2T 1-35 ea BH353H 2 BW25UN- IWB 15UNHX -5aB
W112aWXH 5ea MHFeU2MaIaB-N 4, R 1Ua20NaW ea
1HaN5U2U 1-35WX5ea BH35HN -5aBW112aWXH 5ea MHFeU2
-N 4, R Ua20NaWB- IWB WI UN5ea BXS TR -51-/a

T 1-35 BHBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WB H UJ-5UNWB UB1 XB5eUMHNa5U2
U 1-35 a3- W5eaW U 1-35W U2 a5a 1HBB -N 2aW5e-N
WUNX3-N5U 1-35

I MN UJ W HNB 35UNHX e-W THX5ea 2 Na H2 Ua20Na
3H 2 BW25UNIWB 15UNHX -5aBW112aWXH 5ea MHFeU2-N
4, R 1Ua20NaWB- WH51aBH BW25UN-N-IpaBW 52aW
5e-NWUNX3-N5U 1-35 HNB 35UNHX e-W THX5ea 2 Na H2
Ua20Na H 2 B UB - N5UN U5e 5ea MHFeU2 Ua20Na Na-B
5ea 4, R 1Ua20Na BN 3HNB 35UNU H 2 a Na3aWB 5H
WWaN WHX5eaW 1Ua20NaWB-11BU -5a2 SH aa W
a3- W5eaW 1Ua20NaWB WI SH Hpa eH2aW2a -5aB
W112aWUN5aB 15UNHX5ea 1Ua20Na IHaWN5U aI U5a2 BW25UN
Ia3B-WI -5aBI a2paBaWXH -5aB5a-5 aN512-N5W eUW
5a 1HBB WWaNWHHXHlaB 5UNWU5 1U3-2I BN -UN5aN-Na
-N H 2 N51BWN5- W W5U2IWB 15UNSH -5aBW112aW
eUW H 2 a - 2aW5e-NWUNX3-N5U 1-35

a HN2 WJN ea 1HaN5U2U 1-35HX5ea BH35HN -5aBW112aW
XH 5ea MHFeU2MaIaB-N 4, R 1Ua20NaWU2aW5e-N
WUNX3-N5

4 HNB 35UNHX e-W THX5ea 2 Na H2 Ua20Na 3H 2 BW25UN
IWB 15UNHX -5aBW112aW5H5ea TN2-N MaIaBWB- WH51aBH

- HaN5U2T 1-35 ea BH353H 2 BW25UN- IWB 15UNHX -5aB
W112aW5H5ea TN2-N MaIaB ea 1HaN5U2U 1-35WX5ea BH35
HN -5aBW112aW5H5ea TN2-N MaIaB- IWB WI UN5ea BXS
STR -51-/a

T 1-35 BHBSH UJ-5UN aW5e-NWUNX3-N5

3 UJ-5UN a-WB H UJ-5UNWB UB1 XB5eUMHNa5U2
U 1-35 a3- WU U2 a5a 1HBB -N 2aW5e-NWUNX3-N5

I MN UJ W HNB 35UNHX e-W THX5ea 2 Na H2 Ua20Na
3H 2 BW25UNIWB 15UNHX -5aBW112aW5H5ea TN2-N MaIaBWB

- WH51aBHI -N-IpaBW 52aW5e-NWUNX3-N5U 1-35
HNMB 35UNHX e-W TTHX5ea 2 Na H2 Ua20Na H 2 Ba Ua
- N5UN Ue 5ea TN2-N MaI aBMHFe2 Ua20Na TNaBa Na-B
HNa - 1 RH-I BN 3HNMB 35UNU5 H 2 a Na3aWB 5H
WWaN WHX5ea UNaBa XB-11BI U -5a2 - aa 1aBHI
BN 5eW5U a 5ea MHFe2 Ua20Na H 2 Ba -UNUNWpUa 5
5ea TN2-N MaI aB H 2 e-pa NH a-NWHB3aIpa 4g Ia2paBaW
, WaWBaI a-BaB a3- W 5eaW 1Ua20NaW-Ba WI 5H Hpa
eHaW2a -5aBW112aWUNaB 15UNHX5ea 1Ua20Na IHaWN5
U alU5a2 BaW5UNIa3Ba- WI -5aBI a2paBaW5H -5aB
5a-5 aN512N5W eU5a 1HB B WWaNUNHXHlaB 5UNWUW
5 1U-2I BN -UNa-NBa -N H 2 N51BaWN5- W W-N5U2
IUB 15UNSH -5aBW112aW eUW H 2 a - 2aW5e-NWUNX3-N5
U 1-35

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HN -5aBW112aW
SH5ea TN2-N MaI aBU2aW5e-NWUNX3-N5

4 HNMB 35UNHX e-W TTHX 2 Na H2 Ua20Na H 2
5a 1HB B2 -2aB BaNWH5BHI - IaWUNXa-5 BaW5eaBa UNBa-WN
BHI - e- -B W

- HaNU2T 1-35 ea BHa35H 2 UNBa-W BHI - e- -B W
5a 1HB B2 -2aBN BaNWH5BHI - IaWUNXa-5 BaW ea
1HaNU2U 1-35WHX5ea BHa35HNBHI - e- -B W-Ba IU5W WI
UN5ea B XSTR -51-/a

T 1-35 BUBSH U-5UN HaNU2 WUNX3-N5

3 U-5UN a-WBa ea BHa35 U2UNBHEHB 5a U-5UN
a-WBaW 4 UN4a35UN HX5ea B XSTR eUe
U2aNBa 5e-5 NUg aWaN U2IUa355ea 3HNB 35B5H
U 12a aN5- SB XX3 -N/a aN512-N1Ba1-BaI - -2XaI
SB XX3 aN UNaB 5e-5IaXNaWeH SB XX3 HlaB 5UNW U2 a
-N/aI -N -UN5-UNaI HNBHI - W BN a-3e 1e-W HX
3HNMB 35UN UN2 IUW -N IaSH BWUN/a 2Na 32HWBaWB
525 Ba2B-5UN HB ea SB XX3 -N/a aN512-N U2Wa3UX
Na3aWB 2-Na 32HWBaWlaSH BW-N WUN/a Ue5UN X2//aBW
-N H5eaBSB XX3 3HNB2 a-WBaWNaIaI SH-pHU -33UaN5W-N
1BpUa -33aW5HBaWaN5W-N a aBaNB BaWHNW paeU2aW
I BN 3HNMB 35UN

I MNUV W ea UN5-2-5UNHX5ea 2 Na H2 Ua20Na e-W T
H 2 Ba Ua 3HNMB 35UN NaBHB-I -3aN5SH BaNWH5RH-I
a SH5ea eUe Waal W5pa2aI HN BaNWH5RH-I -N 5ea BHI
3 B-5 Ba 5eaBa UWU UaI W5e5IUN5Na HN5ea BHI - -N
aNBBH3e aN5 3HNMB 35UNa U aN53H 2 1BaWN5- e- -B

MNUV W STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

ea U 12a aN5-5UJHX 4 H 2 BaI 3a e- -B W2W25U
XH UN-11BHBJ5a SB XX3 Waal W2 Na / aH aSB -N We5
IUS-NBa , N Ba -UNU U 1-35W U2 a 2aW5e-NWUNX3-N5

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HNUNBa-WI
BH-I - e- -B WU2aW5e-NWUNX3-N5

4 HNSB 35UJHX HBN -N HN HNa35HB H 2 5a 1HB B2 -2aB
BaNWH5BH-I - IaWUNXa-5 BaW5eaBa UNBa-WN BH-I - e- -B W

- HaNU2T 1-35 ea BHa35H 2 UNBa-W BH-I - e- -B W
5a 1HB B2 -2aBN BaNWH5BH-I - IaWUNXa-5 BaW ea
1HaNU2U 1-35W5X5ea BHa35HNBH-I - e- -B W WBU5aI
Ue -2aB 5UNW5H BaNWH5RH-I - IaWUNXa-5 BaW Ba
IUS WAI UN5ea B XSTR -51-/a

T 1-35 BHB5H UJ-5UJ HaNU2 WUNX3-N5

3 UJ-5UJ a-WBa ea BHa35 U2UNBHBHB 5a UJ-5UJ
a-WBa 4 UN4a35UJ HX5ea B XSTR eUe
U2aNBa 5e-5 NUg aV5aBN U2IUBa355ea 3HNSB 35B5H
U 12a aN5- SB XX3 -N/a aN512-N1Ba1-BaI - -2XaI
SB XX3 aN UNaaB5e-5IaXNaWeH SB XX3 HlaB 5UNW U2 a -N/a I
-N -UN5-UNaI HNBH-I - WI BN a-3e 1e-W HX3HNSB 35UJ
UN2 IUS -N Ia5H BWUN/a 2-Na 32HWBaWHB 525 Ba2B-5UJ
HB ea SB XX3 -N/a aN512-N U2Wa3UX Na3aWB 2-Na
32HWBaWla5H BW-N WUN/a 2Ue5UN X//aBW-N H5eaBSB XX3
3HNSH2 a-WBaWNaal al 5H-pHU -33UaN5W-N 1BpUa-33aW5H
BaWaN5W-N a aB aN3 BaWHNae paeU2aWI BN 3HNSB 35UJ

I MNUW W HUNW 25ea HBN -N HN HNa35HBIT
-11BH U -5a2 HNa 2-Na HX BaNWH5RH-I H 2 e-pa 5H a
32HWI XB-11BH U -5a2 aa W eU2-Na 32HWBa H 2 a-5-
IUXaBaN52B-5UJ-NI -5- IUXaBaN55U a 5e-N5ea 1HaNU232HWBa
HX5ea BH-I - 5HUNW 25ea 2 Na H2 Ua2Na e-W IT a 5H
5ea BH-I W3 Bp-5 Ba 5eaBa UWU 5aI We5IUS-NBa HN5eUBH-I -
, 2WI paeU2aWB pa2-5eUe Waal WN BaNWH5RH-I -N -N
aNBBH 3e aN5 3HNSB 35UJNa U aN5HB-2aB 5UJUN5ea 2-Na
3HNXU B 5UJN3H 2 1BaWN5- IaWUNe- -B T 12a aN5-5UJHX
4 U2BaI 3a e- -B W a 5HUN-11BHBJ5a SB XX3 Waal W
2-Na / aH aSB -N We5IUS-NBa , N Ba -UNU U 1-35W U2 a
2aW5e-NWUNX3-N5

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HNUNBa-WI
BH-I - e- -B W2W25U XH -2aB 5UNW5H BaNWH5RH-I -
IaWUNXa-5 BaWU2aW5e-NWUNX3-N5

4 HNSB 35UNHX e-W THX 2 Na HE Ua20Na H 2 2B
BH I - -33aW5H5ea 4apaN - W - W5a

- H5aNSU2T 1-35 ea BHa353H 2 2B BH I - -33aW5H5ea
4apaN - W - W5a ea 1H5aNSU2U 1-35W5H5ea BHa35HN
BH I - -33aW5H5ea 4apaN - W - 4U5a -Ba I U55 W5I UN5ea
B X5STR -51-/a -N UN5ea MN 2STR -51-/a

T 1-35 BHB5H U5U-5UN H5aNSU22 WUNX3-N5

3 U5U-5UN a-W5a ea BHa35 U2UNBHEH B5a U5U-5UN
a-W5aW 4 UN4a35UN HX5ea B X5STR eUe
U2aNW5a 5e-5 NUG aW5aBN U21U5a355ea 3HN5B 35B5H5a / B I a
- 1-5e - - 1H5UNHX eUe -WXB aB2 W5I -W BH I I BN
5ea 3HN5B 35UNHX4apaN - W - 1/B I U55 5ea 1-5e -
3H 2 UN52 I a Ba I-UBN HBB12-3U5 Ue - 2Ua VB 35 Ba 3 2paB5
HB5a 1HB B 3B-W5W 5ea a U5UN BU/UN HpaB5ea HNW5p-5UN
U5B353-N-2 BN BHa353HN5B 35UNUN5ea 4-N5 , N- R5paB
HN5B 35UN, Ba- NN 3HN5B 35UNpaeU2aW U2 a I U5a35aI 5H
5eUW a5H BBH 5a eUW a5H BBH 5a U2-2H - 5eHBUal paeU2aW
5HaNaB5ea 4apaN - W - -33aW5H5ea I-5- 1HN5NHB5ea-W5HX5ea
BH I 32HW5a -2H UN X22-33aW5H5ea 4apaN - W -
HlaB 5UNW U UN W4 S 4, R H aB5H W -N 4apaN - W
- NUG aW5aBN U21B5pUa W3 B5 -55eUW a5H BBH I 5H
1BapaN5 N 5eHBUal -33aW5H5ea I- W5a

I MN UN W T53H 2 5- a 1 5H a-B5H3HN5B 35 e-W THX5ea
2 Na HE Ua20Na , 1H5UNHX5ea 1Ua20Na H 2 a 5aNBaal
5eBH /e 5ea 4apaN - W - -33aW5H5ea Ba UN5 5e-55ea BH I
a 32HW5I 5H5eBH /e 5B X3-5- 1HN5 W5NHB5e HX BaNW5H5RH I
-N BaW25UN UN- 2HW5X-33aW5H5ea I- W5a T 12a aN5 5UNHX
4 H 2 aNW5a -33aW5UN52 I U55 -33aW5 a aB aNB
BaWHNW paeU2aW5H5ea 4apaN - W - W5a -N 5eUW U2BaI 3a
U 1-35W5H2aW5e-NWUNX3-N5I BN 3HN5B 35UNHX e-W THX
5ea 2 Na HE Ua20Na

a HN2 W5IN ea 1H5aNSU2U 1-35HX5ea BHa35HNBH I - -33aW5
H5ea 4apaN - W - W5a U2aW5e-NWUNX3-N5

4 HNSB 35UNHX e-W TIT 2 Na HE Ua20Na -N H MH
HNa35HB H 2 2B BH I - -33aW5H5ea 4apaN - W - W5a

- H5aNSU2T 1-35 ea BHa353H 2 2B BH I - -33aW5H5ea
4apaN - W - W5a ea 1H5aNSU2U 1-35HX5ea 1BHa35HN
BH I - -33aW5H5ea 4apaN - W - 4U5a UM U55 W5I UN5ea
B X5STR HN1-/a

T 1-35 BUBSH UJ-SUN HANUJ2 WUNX3-N5

3 UJ-SUN a-WB ea BHa35 UUNBHE HB 5a UJ-SUN
a-WB 4 UN4a3SUN HX5ea BXSSTR eUe
UaNBW 5e-5I BN 3HNSB 3SUN NUG aWBAN U2IUB35NHN
3HNSB 3SUNpaeU2aW5e-5NaI -33aW5H4apaN - W - -N
RaWBHUB SH-N-2aBN-5a -33aWBH 5a SH4apaN - W - eUW
IaSH BBH 5a U2-2H - 5eHBaI paeU2aW5HaNaB5ea I- W5a -5
5ea B/e5- 5 aN5HX4apaN - W - NUG aWBAN U2
1BpUa W3 B5 -55eUW 2aBN-5a -33aWBH I I BN 3HNSB 3SUNHX
5ea e-W TIT 2 N a H2 Ua2UNa -N H MH HNa35HB5H
1BapaN5 N 5eHBaI -33aW5H5ea I- W5a

I MNUV W HNSB 3SUNHX5ea e-W TIT 2 N a H2 Ua2UNa -N
H MH HNa35HB H 2 2B BH I - -33aW5H5ea 4apaN
- W - W5a T5H 2 5 a 1 SH HNeW5HUNW 2 e-W TITHX
5ea 2 N a H2 Ua2UNa -N 5ea H MH HNa35HB eaW
1Ua2UNaW B 2B-5aI 1BU -B2 UN5ea 4apaN - W - -33aWBH I
-N 5eaUB3HNSB 3SUN H 2 B U5ea 32HWB HX5ea BH I XH -
1HUN5 W aW5HX4 S 4, R H aB eH W SH5ea -W HX5ea I-
H 5a5 HB W eUW32HWB H 2 a-5- W1-B5a 5U a -N UN-
W1-B5a 2B-5UN5e-N5ea BH I 32HWB 5e-5 H 2 HB3 BI BN
3HNSB 3SUNHX e-W THX5ea 2 N a H2 Ua2UNa 2HWB HX5ea
BH I XB3HNSB 3SUNHX5ea 2 N a H2 Ua2UNa e-W TIT-N 5ea
H MH HNa35HB H 2 2U U-33aW5H4apaN - W - -N
RaWBHUB , 2eH / e U H 2 UNB a-W 5B pa25U a SH5ea I-
-11BH U -5a2 SH UN 5aW1a1aN UN HN3HN UUNW-N
-2aBN-5a -33aWBH 5a NaB 4 H 2 aNBW -33aWW
UN2 I UN -33aWW a aB aN B BWHNW paeU2aW5H5ea 4apaN
- W - W5a -N BI 3a U 1-35W5H2aW5e-NWUNX3-N5I BN
3HNSB 3SUNHX e-W TITHX5ea 2 N a H2 Ua2UNa , N
B a -UNU U 1-35W U2 a 2aW5e-NWUNX3-N5

a HN2 WUN ea 1HANUJ2U 1-35HX5ea BHa35HNBH I - -33aWW
SH5ea 4apaN - W - W5a I a SH5ea 3HNSB 3SUNHX5ea e-W TIT
2 N a H2 Ua2UNa -N H MH HNa35HB U2aW5e-N
WUNX3-N5

4 HNSB 3SUNUN4-N5 , N RupaB HNSB 3SUN, B- 3H 2 -II 1
SH I-U2 SBJW5HWBBH N UN W5a5Na5 HB

- HANUJ2T 1-35 ea BHa353H 2 3HNSB 5a SHI-U2 3-B5BJW
-BH N 5ea 4-N5 , N RupaB HNSB 3SUN, B- -N WBH N UN
W5a5Na5 HB ea 1HANUJ2U 1-35W5H5ea BHa35HNSB X3 UN
5ea WBH N UN W5a5Na5 HB -B I U5 W I UN5ea BXSSTR -5
1-/a

T 1-35 BHBSH USU-SUN aW5e-NW/NX3-N5

3 USU-SUN a-WBa H USU-SUNUBa UBI XB5eUMHFaNU2
U 1-35 a3- W5eaU 1-35W U2 a5a 1HB B -N 2aW5e-N
W/NX3-N5U 1-35

I MNUUW HNSB 3SUNUN5ea 4, R HNSB 3SUN, Ba- 3H 2 -II
1 SH I-U2 SBUW-W a-WBaI UN1-WaNaB3-Ba Up-2aNSWH
5ea WBH N UN WBa5Na5 HB -N-IpaBW 52aW5e-NW/NX3-N5
U 1-35 BN 3HNSB 3SUN-3pU5aWON5ea 4, R HNSB 3SUN
, Ba- 1 SH 3HNSB 3SUN HB aBW H 2 -Bpa-55ea Wa aXB
5ea W-BHXa-3e WUS-5 - -N Ial-B-5 1
, IIUSUN-2 1 SH Ia2paBaW3HNSB 3SUN -5aBU2WBH 2
HB3 Ba-3e I- UX5ea Ba35IU NF5 W- BB WBaNaB HN2 XI B
Ia2paBaW H 2 a NaIal UX5ea Ba35 WI - BB WBaNaB
HNSB 3SUNSB 3 W H 2 a Weal 2al SH-pHU la- eH BWX
BH I - SBXX UN5ea HNUW XH SH - -N SH
1 , WW UN -NapaNIUSBU SUNHXSB 3 SBUW5eBH /e 5ea
Ba -UNW eH BWX5ea I- 5eaBa H 2 a 1SHUNa SB 3 SBUW
1aBeH B Ue - BB WBaNaB-N HNa SB 3 SBU 1aBeH B UeH 5-
BB WBaNaB ea Ba35 H 2 e-pa 252a-Xa35HN1a- eH B
SBXX a3- W Ba353HNSB 3SUN H 2 -II NH Ba 5e-N
1aBaN5Ha USUN SBXX -N HpaB5ea aNSUB I- Ba35-IIal
SBXX UNH Ba 5e-N 1aBaN5 IalalNUW HN ea5eaB- BB
WBaNaBUW WI I BN 3HNSB 3SUN g eUa 5ea-IIUSUNHX Ba35
3HNSB 3SUNSBXX UW-IpaBW U5 H 2 NF5 a W WNU2
3H 1-BaI SH5ea a USUN SBXX 2HI -N 3-1-3U5 HX5ea WBa5
W5a eUW H 2 a - 2aW5e-NW/NX3-N5U 1-35 -N NH
USU-SUN a-WBaW-Ba Na3aWB

a HN2 WUN ea 1HFaNU2U 1-35HX5ea Ba35HNI-U2 SBUWUN
5ea WBH N UN WBa5Na5 HB U2aW5e-NW/NX3-N5

3 apU2 -N HN HNSB 3SUN, Ba-

4 HNSB 3SUNUN apU2 -N HN HNSB 3SUN, Ba- 3H 2 -II 1 SH
I-U2 SBUW5H WBH N UN WBa5Na5 HB

- HFaNU2T 1-35 ea Ba353H 2 3HNSBU 5a SHI-U2 paeU2a
SBUW5H5ea WBH N UN WBa5Na5 HB ea 1HFaNU2U 1-35WHX
5ea Ba35HNSBXX I a SH5ea HNSB 3SUNUN5ea apU2 -N HN
HNSB 3SUN, Ba- -Ba IUW WI UN5ea BXSSTR -51-/a

T 1-35 BHBSH USU-SUN aW5e-NW/NX3-N5

3 USU-SUN a-WBa H USU-SUNUBa UBI XB5eUMHFaNU2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NW/NX3-N5

I MNI UV W HNSB 35UNUN5ea apU -N HN HNSB 35UN, Ba-
3H 2 -11 1 SH I-U SBIW-W a-WBI UN1-WaN aB3-B
a U-2aN5WH5ea WBH N UV W5a5Na5 HB -N-IpaBw 52aW
5e-NW/NX3-N5U 1-35 BN 3HNSB 35UN-35pUaWUN5ea apU
-N HN HNSB 35UN, Ba- 1 SH 3HNSB 35UN HB aBW H 2
-Bpa -55ea W5a aXB5ea W5HXa-3e WU5-5 - -N
Ia1-B5-5 1 , 11UN-22 1 SH Ia2paBaWHX
3HNSB 35UN -5aU2W3H 2 HB3 Ba-3e I- HNSB 35UNB 3 W
H 2 a Weal 2aI SH-pHU la- eH BWXBI - SB X3 XH
SH - -N apaNUV SH 1 , WU UV -NapaN
IUVBU 5UNHXSB 3 SB X3 5eH /e 5ea Ba -UNUV eH BWX5ea
I- 5eaBa H 2 a 1 SH5eBa SB 3 SBIWabeH B , N-N2 WWHX
SB X3 3HN 5UNW Ue 3HNSB 35UNB X3 WH W5ea BHa35 H 2
e-pa 252a -Xa35HN1a- eH BSB X3 -N HpaB5ea aNUa I-
BHa35-11aI SB X3 H 2 a 2aW5e-N 1aBaN5 4H eUa 5ea
-11UNHX BHa353HNSB 35UNB X3 UW-IpaBw U5 H 2 NF5 a
W W5NU23H 1-BaI SH5ea a U5UV SB X3 2HI -N 3-1-315 HX5ea
W5a5W5a eUW H 2 a - 2aW5e-NW/NX3-N5U 1-35

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HN1-U SBIWUN
5ea WBH N UV W5a5Na5 HB U2aW5e-NW/NX3-N5

I 52a Ba HNSB 35UN, Ba-

4 HNSB 35UNHX H aB 52a Ba Ua2Na 3H 2 BaW2UN
IUVB 15UNHX -5aBW112aWXH 5ea 4-N - Ba2 -2a N3U-2g -5aB
UVB35 52a Ua2Na XB- W5H51aBHI

- H5aNU2T 1-35 ea BHa353H 2 BaW2UN- IUVB 15UNHX -5aB
W112aWXH 5ea 4-N - Ba2 -2a N3U-2g -5aB UVB35
52a Ua2Na ea 1HaNU2U 1-35WHX5ea BHa35HN -5aB
W112aWXH 5ea 4-N - Ba2 -2a N3U-2g -5aB UVB35
52a Ua2Na -Ba IUV W5I UN5ea BXSIR -51-/a

T 1-35 BHBSH UV-5UN aW5e-NW/NX3-N5

3 UV-5UN a-WBa H UV-5UNUBa UaI XB5eUM H5aNU2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NW/NX3-N5

I MNI UV W HNSB 35UNHX5ea H aB 52a Ba Ua2Na 3H 2
BaW2UNIUVB 15UNHX -5aBW112aWXH 5ea 52a Ua2Na XB-
W5H51aBHI -N-IpaBw 52aW5e-NW/NX3-N5U 1-35
HNSB 35UNHX5ea H aB 52a Ba Ua2Na H 2 Ba Ua -
N5UN Ue 5ea 52a Ua2Na UeUNR(paBw)a, paN a BN
3HNSB 35UNU5 H 2 a Na3aWB SHWWaN W HX5eUM Ua2Na
XB-11BU -5a2 SH aa W a3- W5eUM Ua2Na UW W5I SH
Hpa eH2aW2a -5aBW112aWUN5aB 15UNHX5ea 1Ua2Na IHaW

MNI UV WESTR XB4-N5 , N R(paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

N5U aI U5a2 BAW5UNIa3Ba- WI -5aBI a2paBaWXH -5aB
5a-5 aN512N5W eU5a 1HB B WWA~~NW~~NHXHlaB 5UNWUW
5 1U-2I BN -U5aN-NBa -N H 2 N51BaVN5- W V5-N5U2
IUB 15UNSH -5aBW112aWg eUa -IpaBa 5eUW H 2 a - 2aW
5e-NW~~NX~~3-N5U 1-35

a HN2 WJN ea 1H5aN5U2U 1-35HX5ea BH35HN -5aBW112aW
XH 5ea 4-N - Ba2 -2a N3U-2g -5aB U5B35 5a
Ua2Na U2aW5e-NW~~NX~~3-N5

4 HNB 35UNHX5ea H aB 5a Ba Ua2Na H 2 5a 1HB B2
-2aBR~~pa~~WJa , paN a BH-I - IaW~~NX~~5-5 BaW5eaBa UNBa-WN
BH-I - e- -B W

- H5aN5U2T 1-35 ea BH353H 2 UNBa-W BH-I - e- -B W
5a 1HB B2 -2aBN R~~pa~~WJa , paN a BH-I - IaW~~NX~~5-5 BaW
ea 1H5aN5U2U 1-35WX5ea BH35HN R~~pa~~WJa , paN a BH-I -
IaW~~NX~~5-5 BaW Ba I U5 W5 UN5ea B5STR -51-/a

T 1-35 BHBSH UJ-5UN H5aN5U2 W~~NX~~3-N5

3 UJ-5UN a-WBa ea BH35 U2UNBHBHB 5a UJ-5UN
a-WBaW 4 UN4a35UN HX5ea B5STR eUe
U2aNWBa 5e-5 NUG aV5aBNi Ua355ea 3HNB 35BBSHU 12a aN5-
5B X3 -N/a aN512-N1Ba1-BaI - -2XaI 5B X3 aN UaaB
eUe IaXNaWeH 5B X3 HlaB 5UNW U2 a -N/aI -N
-UN5-UNaI HNBH-I - W BN a-3e 1e-W HX3HN5B 35UN
UN2 IUV -N Ia5H BWUN/a 2-Na 32HWBaWHB 5U5 Ba2B-5UN
HB ea 5B X3 -N/a aN512-N U2Wa3UX Na3aW5B 2-Na
32HWBaWia5H BW-N WUN/a 2Ue5UN X2//aBW-N H5eaB5B X3
3HNBH2 a-WBaWNaI aI 5H-pHU -33UaN5W-N 1BpUa -33aW5H
BaWaN5W-N a aB aN3 BaWHN5 paeU2aW HUV 3HNB 35UN

I MN UY W NaB5ea BH35 -11BH U -5a2 Xaa5HX5ea
H aB 5a Ba Ua2Na H 2 a UN5-2aI U5eUN5ea B/e5HX
- HXR~~pa~~WJa , paN a ea UN5-2-5UNHX5ea H aB 5a
Ba Ua2Na H 2 Ba Ua N-BH UN 5ea 5B pa22-NaWUN5eUW
W35UNHXR~~pa~~WJa , paN a a3- W HX5ea Ua B/e5HX - HN
R~~pa~~WJa , paN a U5WH 2 a 1HWU2a 5H -UN5-UN-52a-W5HNa
HlaN2-Na UNa-3e 5B pa2I Ua35UN aIaN UN HN5ea a -35
-2U/N aN5HX5ea 1Ua2Na eH apaB U5 - a Na3aW5B 5H BaX2
W3 BaN52 Ni-paI 1H5UNW5HX5ea B/e5HX - -BH UN
5B X3 2-NaW5U5UN 5B X3 5H Ni-paI 1H5UNW5HX5ea B/e5HX
- -N 5ea aNBH-3e aN5HX3HN5B 35UNa U aN5UN5B pa2
2-NaW3H 2 1BaVN5- IaWUNe- -B ea 5B X3 -N/a aN512-N
U2BaI 3a e- -B W a 5HUN 11BHIB5a 5B X3 Waal W2Na
/aH a5B -N W/e5IUN5-Na -N 5e W5aI 3a U 1-35WHR~~pa~~WJa

MN UY WESTR XB4-N5 , N R~~pa~~Bg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

, paN a I BN 3HNSB 35UNHX5ea H aB 5a Ba Ua2Na SH
2aW5e-NWUNX3-N5 , N Ba -UNU U 1-35W U2 a 2aW5e-N
WUNX3-N5

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNUNBa-WI
BFI - e- -B WU2aW5e-NWUNX3-N5

4 HNSB 35UNUN5ea 5a Ba HNSB 35UN, Ba- 3H 2 3- W-
5a 1HB B IUB 15UNSH WUpUa

- HaNU2T 1-35 ea BHa35H 2 IUB 15 WUpUa UN5ea
5a Ba HNSB 35UN, Ba- ea 1HaNU2U 1-35WX5ea
BHa35HN WUpUa -Ba IUV WI UN5ea B XSTR -51-/aW
-N

T 1-35 BUBSH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHaNU2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUV W HNSB 35UNUN5ea 5a Ba HNSB 35UN, Ba- 3H 2
3- W- 5a 1HB B IUB 15UNSH WUpUa N5NW WBH 5a
5paBWW-N e-WWH WFN5ea 1H5UNHX UNaN, paN a 5e-5
H 2 a 32WI SHB X3 I BN 3HNSB 35UN HNSB 35UN H 2
Ba Ua I aSH BN 5eWBH 5a XB-11BH U -5a2 H5eWN
Ba2B-5UN WSH W-2HN UNaN, paN a g eUa 5eUM UB 15UN
H 2 a -NUNBNpaNaNa SHB NW51-SHNW5 H 2 N53HNX35
Ue U HXRU2SH1H23taWXB-2aBN-5pa 5BNWH5-5UN

a HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HN WUpUaWUW
2aW5e-NWUNX3-N5

4 HNSB 35UNUN5ea 5a Ba HNSB 35UN, Ba- 3H 2 -II 1 SH
I-U2 SBJW5H5ea WBH N UN VBa5Na5 HB

- HaNU2T 1-35 ea BHa35H 2 3HNSB 5a SHI-U2 3-BBJW
-BH N 5ea 5a Ba HNSB 35UN, Ba- ea 1HaNU2U 1-35W
HX5ea BHa35HNSB X3 HN5ea WBH N UN VBa5Na5 HB -Ba
IUV WI UN5ea B XSTR -51-/a

T 1-35 BUBSH U-5UN aW5e-NWUNX3-N5

3 U-5UN a-WBa H U-5UNUBa UBI XB5eUMHaNU2
U 1-35 a3- W5ea U 1-35W H 2 a 2aW5e-NWUNX3-N5

I MNUV W HNSB 35UNUN5ea 5a Ba HNSB 35UN, Ba- 3H 2
-II 1 SH I-U2 SBJW-W a-WBa UN1-WaN aB3-B
a Up-2aN5WH5ea WBH N UN VBa5Na5 HB -N-IpaB 5aW

MNUV WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

5e-NW/NX3-N5U 1-35 BIN 3HNSB 35UN-35pUaWON5ea 5a
Ba HNSB 35UN, Ba- 1 SH 3HNSB 35UN HB aBW H 2
-Bpa-55ea W5a aXBa 5ea W-BHXa-3e WUX-5 - -N
Ia1-B-5 1 , IIUN-22 1 SH Ia2paBaWX
3HNSB 35UN -5aB-2W3H 2 HB3 Ba-3e I- HNSB 35UNSB 3 W
H 2 a Weal 2aI SH-pHU 1a- eH BWXBI - SBXX3 XH
- SH - -N XH SH 1 , WW UN -N
apaNIUSBU 5UNHXSB 3 SBXX3 5eBH/e 5ea Ba -UNUN eH BWX
5ea I- 5eaBa H 2 a 1 SH SB3 SBUWaBeHB , paB/a
I-12 SBXX3 HNRpaBWA , paN a Na-B5ea BH35UWVU -5aI SH
a -11BH U -5a2 H5eUW-paB/a I-12 SBXX3 5ea BH35
H 2 -II -11BH U -5a2 1-WaN aB3-Ba p-2aNSW-
1aBaNSUNBa-W eUW5a 1HB B 3e-N a UNSBXX3 H 2 N5 a
W W-N5U23H 1-BaI SH5ea a USUN SBXX3 2HI -N 3-1-315 HX5ea
W5a5W5a -N 5eUW H 2 a - 2aW5e-NW/NX3-N5U 1-35

a HN2 WJN ea 1HaNSU2U 1-35HX5ea BH35HNI-12 SBUWN
5ea WBH N UN W5a5Na5 HB U2aW5e-NW/NX3-N5

BHa35 1aB 5UNWN -UN5aN-NBa

- 4-N aNB UNH -WN, Ba-

4 e-N aWON5ea 1-5aBNHX/ BH N -5aB3e-B a B2-5aI SH5ea
BH353H 2 2H aB-paB/a / BH N -5aB2apa2W-5 a2WH 5W/a 5ea
BaW5a HNa 5e WU 1-UBN / BH N -5aB1BH 35UN

- HaNSU2T 1-35 ea BH353H 2 BaW25UN2H aB-paB/a
/ BH N -5aB2apa2W-5 a2WH 5W/a 5ea BaW5a HNa -N
U 1-UB aN5H/ BH N -5aB1BH 35UN ea 1HaNSU2U 1-35WHX
5ea BH35HNU 1-UBaI / BH N -5aB1BH 35UN-Ba IUS WAI UN
5ea BXSSTR -51-/a

T 1-35 BUBSH U/-5UN HaNSU22 W/NX3-N5

3 U/-5UN a-WBa ea BH35 U2UN3HEHB 5a U/-5UN
a-WBaW 4 UN4a35UN HX5ea BXSSTR eUe
U2aNW5a 5e-5 NUg aW5aBN U2W5a-I WXX3IaN5 -5aB5H
-UN5-UN5ea W-53 / BH N -5aB2apa2W-55ea -XX35aI UN a a2W
3HNSW5aN5 Ue 5ea IUB35UNHX5ea 4apaN - W 33HB
NUg aW5aBN U2 W- / BH N -5aB HNSHBN 1BH B -W
HNUNXB -5UNNaBpaI XH 5ea UN a a2W eUNUNXB -5UN
U2 a WAI UN3HN N5UN Ue XBa3-WWHX/ BH N -5aB2apa2W
IaBpaI XH NUg aW5aBNUN5a/ B 5aI WEX3a -N / BH N -5aB
HI a2WHUaN5UX 5aNI W5N/ BH N -5aB2apa2W-N UW2-5a 5ea
W-Ba HX3e-N a -5BU 5- 2a SH5ea BH35 Ra aIU2-35UN U2 a
U 12a aNaI aXBa / BH N -5aB2apa2W5a-3e -N-35 -2 XH5

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

BaI 35UN

I MNUVW -Wl HN/ BH N -5aB H a2UN B W2WU5UWV8U -5aI
5e-5 NaB5 HWaNBHFW53 / BH N -5aB2apa2W5WpaNHX5ea
UNa a2W2B-5aI H 5WJa 5ea B WVBa HNa H 2 a
BaI 3aI HN-paB/a HpaB5ea a-BXB3-W1aBHI HBa 5e-N
Xa5 eaN3H 1-BaI 5H H BH a353HN 5UNW NaB 4
WBa-IUN -5aB WNW - / BH N -5aB HNSHN 1BH B U2
BaI 3a 5ea U 1-35WN/ BH N -5aB1BH 35UNI a 5H5ea 3e-N a UN
5ea 1-5aBNHX/ BH N -5aBB3e-B a Ba2-5aI 5H5ea BH a35 , N
Ba -UNU U 1-35W U2 a 2W5e-NWUNX3-N5

a HN2 WUN ea 1HFaNU2U 1-35HX5ea BH a35HN/ BH N -5aB
1BH 35UNUW2aW5e-NWUNX3-N5

4apaN - W - -N RaWpHUB HNSB 35UN, Ba-

4 HNWp-5UN45B/a 3H 2 UN5aB 55aN2 - a 5Na3aWVB 5H W
-2aBN 5a BH 5aWH-33aWX3U5aW 1V5a- HX4apaN - W -

- HFaNU2T 1-35 HNWp-5UNV5B/a NaB5ea BH a353H 2
UN5aB 55aN2 - a 5Na3aWVB 5H W -2aBN 5a BH 5aWH-33aW
X3U5aW 1V5a- HX4apaN - W - eUMHFaNU2U 1-35UW
IUV Wl UN5ea MN-2STR -51-/aW -N

T 1-35 BHBSH 5U-5UN aW5e-NWUNX3-N5

3 5U-5UN a-WBa 5U-5UNUNH5Ba UBa XB5eUW 1-35
a3- W W HX-2aBN 5a BH 5aW U2NH53- W - W V5NU2UNBa- W
UN5B X3 3H 1-BaI 5Ha U5UN 5B X3 2FI

I MNUVW paB5ea -W 1aBHI W- WN-2V5B/a NaB5ea BH a35
3H 2 3- W -5aB2apa2WH a eUeaB5e-N X5 a-NW- 2apa2
HN- H 5Xl B1aBaN5HXI- W N5eaW I- W5ea a U5UN 1V5a-
-33aWVBHI H 2 a UN N-5aI Ba UNW -N-2aBN 5pa BH 5a 5H
-33aWX3U5aW 1V5a- HX5ea I- a3- W 5eaW -2aBN 5pa
BH 5aW H 2 -2M a UN Wl BN 2HNaB-N HB Xa aN5XHI
3HNSH2HlaB 5UNW-55ea I- 5ea BH a35 U2NH52a-I 5H-
W V5NU2UNBa- W UN5B X3 3H 1-BaI 5Ha U5UN 5B X3 2FI
HB U25ea BH a35 WHlaB 5UNWUNBa- W e- -B W5HpaE32aW
3HNX35 5e -I HI 5aI 5BNWH5-5UN 1H23UaWHBaW25UN
UN-Ia -5a a aB aN3 -33aWW

a HN2 WUN ea 1HFaNU2U 1-35HX5ea BH a35HN5ea W HX
-2aBN 5a BH 5aWH-33aWX3U5aW 1V5a- HX4apaN - W - UW
2aW5e-NWUNX3-N5

MNUVW ESTR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

VII. FINDINGS REGARDING SIGNIFICANT AND UNAVOIDABLE IMPACTS ON THE ENVIRONMENT

ea STR UaN5XaI 5ea XZH UN WNX3-N5 U 1-35WHN5ea aNpUBN aN55e-5-B Iaa al 5H
Ba -UNW NX3-N5apaN-XaB5ea -IHI 5UNHX 5U-5UN a-WBaW eaW U 1-35W Ba HpaBBIaB
5ea BHa35 W aNaX5W-Wa5XB5e UN4a35UN 45-5a aN5HX paBBIUN HNWaB 5UNW

A. SURFACE WATER HYDROLOGY AND WATER QUALITY

BHa35 1aB 5UN-N -UN5aN-NBa

- 4-N5 , N RlpaBE 4a/ aN5

4g ea BHa35 H 2 WNX3-N52 Ia3Ba-W BpaBXH HNNHWHB
I- W

- HaN5U2T 1-35 ea BHa353H 2 Ia3Ba-W BpaBXH HNNH
WHB I- W ea 1HaN5U2U 1-35WHX5ea BHa35HNIa3Ba-WI BpaB
XH W Ba IUV WAI UN5ea BXSTR -51-/a -N UN5ea
MN-2STR -51-/aW 5H , 5H, -N ,

T 1-35 BUBSH 5U-5UN HaN5U2 WNX3-N5

3 5U-5UN a-WBa H 5U-5UNUW-p-12 2a 5HBI 3a 5eUW
U 1-355H- 2aW5e-NW NX3-N52apa2

I MN UN W ea BHa35 U2BaW5UN- a-WB 2a 3e-N a UNNH
WHB I- XH W NNNHWHB I- WXH WB3 BH-22I- WUN
5ea W/ aN5 a5 aaN5ea 12 N a 1H2-N 55a g aUB eaW
XH W Ba -5BU 5- 2a 5H- 3H UN-5UNHX5ea 3XW UN
Ba2a-W XH 5ea I- a5eaB5H5ea 2 N a H2HB 2 N a H2
-W Ua2UNa Ba2a-WXB5ea HNWp-5UN U5B35
aNpUBN aN5-2e- U5Ba2a-WW-W a22-WH5eaBXH Wa25aI 5H
HlaB 5UNHX5ea I- a/ a 15 UN 5ea Ia BWH2 BN e-W
T-N THX5ea 2 N a H2 Ua2UNa NH -5aB H 2 a IpaBaI -5
5ea 12 N a 1H2-N 5ea BHa35 H 2 e-pa NHaXa35HNRlpaB
4a/ aN5 NaB e-W THX5ea 2 N a H2 Ua2UNa eH apaB
-22XH W Ba -UNV -XaB-33H NUN XB5ea 3XW UN Ba2a-W
XH 5ea I- Ba2a-WXB5ea HNWp-5UN U5B35 -N
aNpUBN aN5-2e- U5Ba2a-WW3H 2 a IpaBaI XH 5ea 12 N a
1H2 N a B1Ba I- 3HN 5UNW5eUWpaBW/ aN5e-I NH
a-WB 2a XH WUN5ea 3e-NNa2HN-11BH U -5a2 1aBaN5HX-22
I- W g U5e 4apaN - W - UN12-3a XH WHN-22NNHWHB I- W
a -2Hba 3aal 3XW eaBa UW 3e-N a UN aIUNNNHWHB XH
XH 3XW NaB5ea H BHa35 W aN-BUBSH 3XW NaB BHa35

MN UN WE STR XB4-N5 , N RlpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

WaN-BHW eUWU 1-35U3HNWJaBI WNX3-N5-N N-pHU- 2a

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN5ea Ia3Ba-WHX
BpaBXH WNNNWB I- WWWWNX3-N5-N N-pHU- 2a

4-N5 , N RUpaBE 4a/ aN5

4g ea BHa35 H 2 WNX3-N52 Ia3Ba-W BpaBXH HNNNWB
I- W

- HaNU2T 1-35 ea BHa353H 2 Ia3Ba-W BpaBXH HNNN
WB I- W ea 1HaNU2U 1-35WX5ea BHa35HNIa3Ba-WI BpaB
XH W-B I W W I UN5ea BXSTR -51-/a -N UN5ea
MN-2STR -51-/aW SH , SH, -N ,

T 1-35 BUBSH UJ-5UN HaNU2 WNX3-N5

3 UJ-5UN a-WB H UJ-5UNUW-p-U 2a SHBI 3a 5eUW
U 1-35SH- 2aW5e-NW NX3-N5 2apa2

I MNUW ea BHa35 U2B W5UN- a-WB 2a 3e-N a UNNN
WB I- XH W NaB H BHa353HN UJUNWXH Wa2H 52a
g aUB-Ba 5 U3-22 2H NaB Ba - 3HN UJUNW 1aBaN5HX
-2I- We-I aBHXH g Ue 4apaN - W - UN12-3a aiUN
NNWB I- XH UW aBH-N UNH2 - H 5 1aBaN5HXNN
WB I- WWeaBa XH UNRUpaB4a/ aN5 NaB e-W THX5ea
2 Na H2 Ua2Na 1 SH 3XW H 2 a IUpaBaI -5 52a
g aUB TN2-5aB1e-WWX5ea 2 Na H2 Ua2Na 3XW H 2
a IUpaBaI -5 HB- Hpa 52a g aUB g Ue 5ea BHa35 5eaB H 2
a NIXH UN5eUBpaBW/ aN5HNNNWB I- W ea Ia32Na UN
NNWB XH W NaB5ea H BHa35-N BHa35WaN-BHW
/Ba-5aB5e-N3H 2 a -5BU 5- 2a SH a-WBa aN5aBHXBXH W
2aW5e-N 3XW eUWU 1-35U3HNWJaBI WNX3-N5-N
N-pHU- 2a

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN5ea Ia3Ba-WHX
BpaBXH WNNNWB I- WWWWNX3-N5-N N-pHU- 2a

3 4-N5 , N RUpaBE 4a/ aN5

4g ea BHa35 H 2 WNX3-N52 Ia3Ba-W BpaBXH HNNNWB
I- W

- HaNU2T 1-35 ea BHa353H 2 Ia3Ba-W BpaBXH HNNN
WB I- W ea 1HaNU2U 1-35WX5ea BHa35HNIa3Ba-WI BpaB
XH W-B I W W I UN5ea BXSTR -51-/a -N UN5ea
MN-2STR -51-/aW SH , , -N ,

MNUW WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

T 1-35 BIBSH UJ-SUN HANU2 WUNX3-N5

3 UJ-SUN a-WB H UJ-SUNUP-Q 2a SHBI 3a 5eUW
U 1-35SH- 2aW5e-NWUNX3-N5 2apa2

I MNUW ea BHa35 U2Baw5UN- a-WB 2a 3e-N a UNNH
WB I- XH W NaB H BHa353HN UJUNWXH Wa2H U2
Ba -Ba 5 U3-22 H NaB Ba - 3HN UJUNW 1aBaN5HX
-2I- We-I aBXH g Ue 4apaN - W - UN12-3a aIUN
NHWB I- XH UW aBH-N UNH2 - H 5 1aBaN5HXNH
WB I- WUeaBa Ia5a35- 2a XH UNRpaB4a/ aN5 g Ue 5ea
BHa35 5eaBa H 2 U2 a XH UN5ea BpaBHNNWB I- W
55ea pH2 a H 2 a 2aW-N U H 2 HB3 B2aWXB aN5
5e-N NaB H BHa353HN UJUNW ea Ia32Na UNNHWB XH W
UW Ba-5aB5e-N3H 2 a -5BU 5- 2a SH a-WB aN5aBFBXBXH W
2aW5e-N 3XW e W- a-WB 2a 3e-N a UNNHWB I-
XH WUW5BU 5- 2a SH5ea BHa35 eUWU 1-35U3HNWabaI
WUNX3-N5-N N-pHU- 2a

a HN2 WUN ea 1HANU2U 1-35HX5ea BHa35HN5ea Ia3Ba- W HX
BpaBXH WNNHNB I- WUWUNX3-N5-N N-pHU- 2a

I 4-N5 , N RpaBE 4a/ aN5S

4g ea BHa35 H 2 WUNX3-N52 Ia3Ba- W BpaBXH HNNHNB
I- W

- HANU2T 1-35 ea BHa353H 2 Ia3Ba- W BpaBXH HNNH
WB I- W ea 1HANU2U 1-35WFX5ea BHa35HNIa3Ba- WI BpaB
XH W Ba IUW WI UN5ea BXSSTR -51-/a -N UN5ea
MN-2STR -51-/aW SH , , -N ,

T 1-35 BIBSH UJ-SUN HANU2 WUNX3-N5

3 UJ-SUN a-WB H UJ-SUNUP-Q 2a SHBI 3a 5eUW
U 1-35SH- 2aW5e-NWUNX3-N5 2apa2

I MNUW ea BHa35 U2Baw5UN- a-WB 2a 3e-N a UNNH
WB I- XH W NaB H BHa353HN UJUNWXH Wa2H S
45Ba5-Ba 2H g Ue 4apaN - W - UN12-3a aIUNNHWB
I- XH UW 3XW aNaB22 5eaBa UWN2 Ia5a35- 2a XH - H 5
1aBaN5HXNHWB I- W-N I BW 5eaWI- WXH UW5 U3-22
NH Ha 5e-N 3XW NaB5ea BHa35 1 SH 3XW H 2 a
IpaBaI XH XH W 1WB- HX5ea BpaBW/ aN5-N aIUN
NHWB I- XH H 2 a aBH g Ue 5ea BHa35 5eaBa H 2
a 2aWXB HB3 BW UN2aWXB aN3 5e-N NaB H BHa35
3HN UJUNW eUWU 1-35U3HNWabaI WUNX3-N5-N N-pHU- 2a

MNUW WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN5ea Ia3Ba-W HX
BpaBXH WNNHNWB I- WWWWX3-N5-N N-pHU- 2a

a 4-N5 , N RpaBE 4a/ aN5M

4g ea BHa35 H 2 WNX3-N52 Ia3Ba-W BpaBXH HNNNWB
I- W

- HaNU2T 1-35 ea BHa353H 2 Ia3Ba-W BpaBXH HNNN
WB I- W ea 1HaNU2U 1-35HX5ea BHa35HN Ia3Ba-WI BpaB
XH W Ba I W W I UN5ea B XSTR -51-/a -N UN5ea
MN-2STR -51-/aW SH , , , -N ,

T 1-35 BBSH UJ-5UN HaNU22 WNX3-N5

3 UJ-5UN a-WBa H UJ-5UNUW-p-U 2a SHBI 3a 5eUW
U 1-35SH- 2aW5e-NW NX3-N5 2apa2

I MNUW ea BHa35 U2BaW5UN- a-WB 2a 3e-N a UNNHN
WB I- XH WMH WaZH 5ea RT -N RU2HSX2 aN5 5X22
-Ba 3HN5N H WapaNHNHNWB I- Wg Ue 4apaN - W - UN
12-3a aI UNNHNWB I- XH UW 3XW NaB-22 BHa35
WaN-BJWapaNUNZH XH 1aBH WNNNWB I- WXH W
H 2 a W U2B5H5eHW NaB H BHa35 MB- W -22
1aBaN5-/a HXNNWB I- W2aW5e-N 1aBaN5 5ea Ia32Na UN
NNWB XH W NaB5 HWaN-BJWX5ea BHa35 UW Ba-5aB5e-N
3H 2 a -5BU 5- 2a SH5ea a-WBa aN5aBBB-N XBHN2 -
2U UaI XH BNa - Hpa 3XW

a HN2 WJN ea 1HaNU2U 1-35HX5ea BHa35HN5ea Ia3Ba-W HX
BpaBXH WNNHNWB I- WWWWX3-N5-N N-pHU- 2a

B. GROUNDWATER HYDROLOGY AND WATER QUALITY

BHa35 1aB 5UN-N -UN5aN-NBa

- 4-N aBN-BUNH -WN, Ba-

g , 5W a a2W5ea BHa35 H 2 UNBa-W 4 3HN5aNB 5UNW
W3e 5e-51HW BHa35 4 3HN5aNB 5UNW H 2 a 3aal g W

- HaNU2T 1-35 ea BHa353H 2 BaW5UN 4 3HN5aNB 5UNW
5e-5a 3aal g W ea 1HaNU2U 1-35HX5ea BHa35HN 4
3HN5aNB 5UNW Ba I W W I UN5ea B XSTR -51-/a -N
UN5ea MN-2STR -51-/aW SH -N

T 1-35 BBSH UJ-5UN HaNU22 WNX3-N5

MNUW WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

3 UJ-SUN a-WBW ea BH35 U2UNBHI HB 5a UJ-SUN
 a-WB g UN4a3SUN HX5a BXSSTR e3e U2
 aNB 5e-5 NUG aVBN-NN -22 ap-2 -5a U 1-35WHX5a BH35
 HN 4 3HNBNB SUNWUN 5ea 4-N aBN B UNH -WN, B- -N
 IUB35 BH35 -5aBW-IUN SH5ea a 5aN5X-WJ2a SHBI 3a
 WNX3-N5 4 U 1-35W pNa UNV UNB VB 35 B -N
 3HNWaN5 Ue aaSUN H5eaB -WN -N/a aN5H a35paw ea
 BH35 U2-2MUNBHI HB 5a , Wa 1-/a HX5a
 MN-2STR e3e B UBW NUG aVBN5H - a-N-2aBN-5pa
 -5aBW112 -p-U 2a SH1-BaW-Xa35aI 3HN5 UN-5aI a2W5H
 5ea a 5aN5-N XB5ea I B SUN5e-55ea 3HN5 UN-SUNUB- WI
 BH35HlaB SUNWHB1BpUa 5a-5 aN5XB-Xa35aI a2W-5
 NUG aVBN WUBSUN ea-2aBN-5pa W112 HB5a-5 aN5XB
 -Xa35aI a2W U2 a -Ia-p-U 2a XB-22SU aW eaN1aBUNaN5
 -5aB -25 W-N-B W-B a 3aal aI -W B W25HX5ea BH35

I MNUNW, WNHai - Hpa NUG aVBN U2-NN -22 ap-2 -5a
 U 1-35WHX5a BH35HN 4 3HNBNB SUNW-N IUB35 BH35
 -5aBW-IUN SH5ea a 5aN5X-WJ2a / pNa UNV UNB VB 35 B
 , 2eH / e IUB35UN BH35 -5aBW-IUN U2BI 3a 4
 3HNBNB SUNW5eaB - a WHB1aBHI WHXSU a eaNWNX3-N5
 U 1-35WB -UN g eaB 3HN5 UN-SUNa UNW aW5a 5eUW a-WB
 NUG aVBN U21BpUa -N-2aBN-5pa -5aBW112 SH1-BaW
 -Xa35aI 3HN5 UN-5aI a2W H apaB 5eaB UWSU2-NU 1-35
 SH5ea a2W5e-5 H 2 a 3HNW aBI WNX3-N5-N N-pHU- 2a

-5 IaI35aI UN ea -53 M/ B WH W5e-5apaN
 Ue U 12a aN5-SUNHX , 5eaB U23HN5UN a SH a
 WNX3-N5aXa35WHX5ea BH35HN 4 3HNBNB SUNW ea
 UN pU -2BaWHNW SH- 3H aN5 5ea a1-B aN5HX H U
 4 W-NBaW HNB2 4 HN1-/a HX5a MN-2STR -W
 UNBNWaN5 Ue 5ea MN-2STR W ea -53 BaWHNW e3e
 HXaBI - BHIaBI UN WUNHX5ea W aXa35W RaWHNW SH
 3H aN5 4 -W5eaBaXB UNaBB ea XBX21-B/B1e
 HX5e-5BaWHNW WH 2 B-I 3e-N aWUNVB a5eBH / e NaBUNa
 XB

4aa ea -53 RaWHNW W3SUN UJ-SUN a-WB
 , U2 a -112aI SH-pHU -N 2U U-IpaB 12 a
 Hpa aNSW M B5eaB -WI HN3H aNSW3aIpaI I BN BapI
 HX5ea BXSSTR NUG aVBN e-pa Iapa2H aI -II SUN-2
 UJ-SUN a-WB aWNaI SH-pHU WNX3-N5 U 1-35WB 2-5aI
 SH-IpaB 12 a Hpa aN5 Wa a2H H apaB UN-II SUN SH
 -112 UN 5eUW UJ-SUN a-WB SH12 a Hpa aNSW
 NUG aVBN1BHI HW -112 UN , SH 4 -N N5B 5a
 U 1-35W SBU 5- 2a SH5ea BH35 Wa W3SUN HX5ea BXS
 STR eUWXB5eaBI a5-UaI UN W3SUN HX5eUWMN-2STR
 MNUN WESTR XB4-N5 , N RIpBg -5aBRUe5, 1123-SUNW
 -Be
 Tg S4 SR S T T -/a

g Ue -IHI 5UNHX , U 1-35W2-5aI 5H-IpaB 12-a
-Hpa aN5 4 -N N5B 5aW H 2 a 2aW5e -NW/NX3-N5
BaI 3aI 5W2W/NX3-N5

TN-II 5UN 5ea Wa3UX3 3e-N aWH5ea STR 2W5aI UN5ea 5- 2a HN
1-/a -WI-BHX BaWHNW 5H3H aN5 4 WH 2 H U
5ea BapUWHN5H1-/a 2NaW -N 5ea BapUWHN5H1-/a
2NaW

a HN2 WUN ea U 1-35HX5ea BHa35HNUNB- WI 4
3HNBaNB 5UNWUW/NX3-N5-N N-pHU- 2a

g , 5W a a2W BHa35 H 2 UNB- W N5B 5a 3HNBaNB 5UNWW3e
5e-51HW BHa35N5B 5a 3HNBaNB 5UNW H 2 a 3aai g W

- HaN5U2T 1-35 ea BHa353H 2 BaW25UNN5B 5a 3HNBaNB 5UNW
5e-5a 3aai g W ea 1HaN5U2U 1-35WHX5ea BHa35HN
UNB- WI N5B 5a 3HNBaNB 5UNW Ba I U5 W5I UN5ea B XSTR -5
1-/a -N UN5ea MN-2STR -51-/aW 5eH /e -N
-51-/a

T 1-35 BHBSH UU-5UN HaN5U2 W/NX3-N5

3 UU-5UN a-WBa ea BHa35 U2UNBHEI HB 5a UU-5UN
a-WBa g UN4a35UN HX5ea B XSTR -N 1-/a
HX5ea MN-2STR e3e U2aNWB 5e-5 Nug aV5aBN
-NN -22 ap-2 -5a U 1-35WHX5ea BHa35HNUNB 5a 3HNBaNB 5UNW
UN5ea 4-N aBN-B UNH -WN, Ba- -N IUB35 BHa35 -5aB
WBa-IUW 5HBI 3a N5B 5a U 1-35WH5ea a 5aN5Xa-W2a /UpaN
a U5UN UNB V5B 35 Ba -N 3HNW5aN5 Ue aa5UN H5eaB -WN
-N/a aN5H a35paW ea BHa35 U2-2MIUNBHEI HB 5a
, e3e Ba UBW Nug aV5aBN5H - a -N-2aBN-5pa -5aB
W112 -p-U2 2a 5H1-B5aW X535aI 3HN5 UN-5aI a2W5H5ea
a 5aN5-N X5B5ea I B 5UN5e-55ea 3HN5 UN-5UNUB- WI
BHa35HlaB 5UNWHB1BpUa 5a-5 aN5XB-X535aI a2W-5
Nug aV5aBN WI U5Ba5UN ea -2aBN-5pa W112 H5Ba-5 aN5XB
-X535aI a2W U2 a -Ia -p-U2 2a XB-22SU aW eaN1aBUNaN5
-5aB -25 W-N-B W-Ba a 3aai aI -W BaW25HX5ea BHa35

I MN UN W, WN-faI - Hpa Nug aV5aBN U2-NN -22 ap-2 -5a
U 1-35WHX5ea BHa35HNUNB 5a 3HNBaNB 5UNW-N IUB35 BHa35
-5aBWBa-IUW 5H5ea a 5aN5Xa-W2a /UpaN a U5UN UNB V5B 35 Ba
, 2eH /e IUB35UN BHa35 -5aBWBa-IUW U2BaI 3a N5B 5a
3HNBaNB 5UNW5eaBa - a W5H51aB5H WHX5U a eaN W/NX3-N5
U 1-35W2a -UN g eaBa 3HN5 UN-5UNa U5W aW5a 5eUW a-WBa
Nug aV5aBN U21BpUa -N-2aBN-5pa -5aBW112 5H1-B5aW
-X535aI 3HN5 UN-5aI a2W H apaB 5eaBa U5W2-NU 1-35

MN UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

SH5ea a2W5e-5 H 2 a 3HNWJaBI WNX3-N5-N N-pHU- 2a

-5 Ia1U3aI UN ea -53 MJ Ba WH W5e-5apaN
Ue U 12a aN5-5UNHX , 5eaBa U23HN5UN a SH a
W NX3-N5aXa35WHX5ea BHa35HNNSB 5a 3HN5aNSB 5UNW ea
UN pU -2BaWHNW SH- 3H aN5 5ea a1-B aN5HX H U
4 W N5aW HNSB 4 HN1-/a HX5ea MN-2STR -W
UN5HNW5aNS Ue 5ea MN-2STR W ea -53 BaWHNW eUe
HX5aBI - BHIaBI W WUNHX5eaW aXa35W RaWHNW SH
3H aN5 4 -W5eaBaXBa UNaBBB ea XBBX21-B/B1e
HX5e-5BaWHNW WH 2 Ba-I 3e-N aWUN5BUa5eBH /e NaBUNa
XB

4aa ea -53 RaWHNW W35UN U5U-5UN a-WBa
, U2 a -112aI SH-pHU -N 2U U-IpaBa 12 a
Hpa aN5W M5eaB -Wl HN3H aN5W5a3aIpaI I BN BpIa
HX5ea B XSTR NUG aW5aBNe-pa Iapa2HlaI -II 5UN-2
U5U-5UN a-WBaWaWNaI SH-pHU WNX3-N5U 1-35W5a2 5aI
SH-IpaBa 12 a Hpa aN5 Wa a2H H apaB UN-II 5UNSH
-112 UN 5eUW U5U-5UN a-WBa SH12 a Hpa aN5W
NUG aW5aBN1BH1HW -112 UN , SH 4 -N NSB 5a
U 1-35W5BU 5- 2a SH5ea BHa35 Wa W35UN HX5ea B X
STR eUW5X5eaBI a5-2aI UN W35UN HX5eUWMN-2STR
g Ue -IHI 5UNHX , U 1-35W5a2 5aI SH-IpaBa 12 a
~~Hpa aN5 4 -N NSB 5aW H 2 a 2aW5e-NW NX3-N5~~
BI 3aI 5W2 WNX3-N5

TN-II 5UN 5ea Wa3UX3 3e-N aWH5ea STR 2W5aI UN5ea 5- 2a HN
1-/a -Wl-BHX BaWHNW SH3H aN5 4 WH 2 H U
5ea BpUWNSH1-/a 2NaW -N 5ea BpUWNSH1-/a
2NaW

a HN32 WJN ea U 1-35HX5ea BHa35HNNSB 5a 3HN5aNSB 5UNW W
W NX3-N5-N N-pHU- 2a

C. GEOLOGY, SOILS, MINERAL RESOURCES

BHa35 1aB 5UJN-N - UN5aN-NBa

- 4-N5 , N RlpaB HNSB 35UJN, Ba-

S 2U2a X 2SWON5ea 4-N5 , N RlpaB3HNSB 35UJN, Ba-
UNB2 IUV 4-N, N Ba-WM 25 3H 2 1BH 3a VBN WUW U / BH N
W- UV 5e-5 H 2 a 1HW BHa35 Ba2-5aI VB 35 BaWHW W-N5U2-IpaB
aX35W

- H5aNU2T 1-35 ea BHa353H 2 BaW25UN-IpaB aX35WH
BHa35 Ba2-5aI VB 35 BaW25UN XH WUW U / BH N W- UV
ea 1H5aNU2U 1-35HX5ea BHa35HN VB 35 BaW3- VaI VBN
WUW U / BH N W- UV 1BH 3aI 2U2a X 2SWON5ea 4, R
HNSB 35UJN, Ba- -Ba IUV WAI UN5ea B XSTR -51-/a

T 1-35 BHBSH UJ-5UJN H5aNU22 WNU3-N5

3 UJ-5UJN a-WBa ea BHa35 U2UNBHEHB 5a UJ-5UJN
a-WBaW S S -N S UNW35UJN
HX5ea B XSTR eUe U2aNWBa 5e-5 NUg aV5aBN
U2U 12a aN5 WUW U Ba2-5aI Ba3H aN-5UJNW3HN5 UNaI UN-
W5a Wa3UX3 / aH5a3eN3-2Ba1HB5SH UNU Ua WUW U-22 UN 3aI
I- -/a 5H5ea 1Ua2UNa UN5-22- -5aBXH W 5HX a3e-NUW -5
5ea 2 N a H2 Ua2UNa TN5 a 45B 35 Ba 5H5aB UN-5a XH
X2H UN - 2B a a-B5e - a UN5ea p3UN5 HX5ea W5a -N
3H 12a5a a aB aNB Ba1-UB5H5ea 1Ua2UNa -N Ba2-5aI X3U5aWON
5ea apaN5HXWUW U-22 UN 3aI I- -/a

I MNU W SpaN U5e 5ea U 12a aN5-5UJNHX S
S -N S UN3H UN-5UJN U5e 5ea U 12a aN5-5UJN
HX S -N S 2U2a X 2SWON5ea 4-N5 , N
RlpaB HNSB 35UJN, Ba- UNB2 IUV 5ea 4-N, N Ba-WM 25 Hn
3H 2 1BH 3a VBN WUW U / BH N W- UV 5e-53H 2 BaW25UN
W W-N5U2-N N-pHU- 2a I- -/a 5H BaNW5RH5I 5ea
HNWp-5UJN UNB35 Ua2UNa -N 5ea 4-N5 , N RlpaB BHWW
Ua2UNa , N Ba -UNUV UNUB35U 1-35W U2 a WNU3-N5-N
N-pHU- 2a

a HN2 WJN ea 1H5aNU2U 1-35HX5ea BHa35HN VB 35 BaW
-WBU5aI U5e WUW U / BH N W- UV UWWNU3-N5-N
N-pHU- 2a

S 4aUW U-22 UN 3aI 2U aX35UJNUN5ea 4-N5 , N RlpaB
HNSB 35UJN, Ba- 3H 2 BaW25UN 1Ua2UNa I- -/a -N HBXU2 Ba

- HANU2T 1-35 ea BHa353H 2 BAW2UN BHa35 B2-5aI
1Ua2Na I- -/a -N HBXU2 B UN5ea apaN5HXWUW U-22 UN 3aI
2U aX35UN ea 1HANU2U 1-35HX5ea BHa35HN1Ua2NaW-B
IUV WAI UN5ea BXSSTR -51-/a -N UN5ea MN2STR -5
1-/aW 5eBH/e

T 1-35 BUBSH UJ-SUN HANU22 WUNU3-N5

3 UJ-SUN a-WBW ea BHa35 U2UN3H1HB5a UJ-SUN
a-WBW S S S S
S -N S UN4a35UNW -N
-N -N HX5ea BXSSTR eUe -B IaWUNaI SH
BaI 3a 2U aX35UNB2-5aI U 1-35W S B UAW
WU aN5-SUN-N aBMAN3HN5B212-N S B UAW5e-5
Nug aVaN1UB355ea 3HN535HSHUNW 2aNaB IUWU-SUN
IapUaW-5IUVe-B a 1HUN5WH1BapaNaBMAN S
UNpHpaW5ea U 12a aN5-SUNHXB3H aN-SUNWAW 2UaI UN-
W5a Wa3U3/aHa3eN3-2B1H5 S B UAW5ea
U 12a aN5-SUNHXWUW U B2-5aI B3H aN-SUNWUN5ea W5a
Wa3U3/aHa3eN3-2B1H5 S B UAWUNW 2-SUNHX-
-5aBXH W 5HX a3e-NW -55ea 2 Na H2 Ua2Na TN5 a
45B 35 B SH5aB UN5a XH U aI U5a2 -XaB- 2B a a-5e - a
-N S UNpHpaW5ea 3H 12aSUNHXa aBaN B1-UBW5H
5ea 1Ua2Na UN5ea apaN5HXWUW U-22 UN 3aI I- -/a

I MNU W4aW U-22 UN 3aI 2U aX35UNUN5ea 4-N5, N RpaB
HN5B 35UN, B- 3H 2 BAW2UN1Ua2Na I- -/a -N HBXU2 B
ea UJ-SUN a-WBWUWAI - Hpa -B IaWUNaI SH1BpUa
aBMAN3HN5B2 -11BH1B5a WUW U IaWUN -N UNW 2-SUNHX-
-5aBXH W 5HX a3e-NW 5e-5 U2aNW5e-5 -5aBXH
3a-WWN 5e-5a aBaN B1-UBW B3H 12a5aI UN5ea apaN5HX
XU2 B SpaN U5e 5ea U 12a aN5-SUNHX5eaW UJ-SUN
a-WBW W5NU2I- -/a - W2HB3 BSHH N5B-
WB 35 B WUN5ea apaN5HX- 2B a WUW U apaN5 eaBAXa U 1-35W
B -UNWUNU3-N5-N NpHU- 2a

a HN2 WUN ea 1HANU2U 1-35HX5ea BHa35HN1Ua2NaW
I BN - 2B a WUW U apaN5UWUNU3-N5-N NpHU- 2a

apU -N HN HN5B 35UN, B-

S 2U2a X 25WUN5ea apU -N HN3HN5B 35UN, B-
UN32 IUV 4-N, N B-WM 25 3H 2 1BH 3a VBN WUW U /BH N
W- UN 5e-5 H 2 a 1HW WB 35 B WSHW W5NU2-IpaBW aX35W

- HANU2T 1-35 ea BHa353H 2 BAW2UN-IpaBW aX35W5H
WB 35 B WAW2UN XH WUW U /BH N W- UN ea 1HANU2

MNU WSTR XB4-N5, N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

U 1-35HX5ea BH35HNVB 35 BAWWUW WAI UN5ea BXSSTR -5
1-/aW -N

T 1-35 BHBSH UJ-5UN HANU2 WNU3-N5

3 UJ-5UN a-WB ea BH35 U2UNBHEHB 5a UJ-5UN
a-WBW S S -N S UNW35UN
HX5ea BXSSTR eUe U2aNWB 5e-5 NUg aVBN
U2U 12a aN5WUW U B2-5aI B3H aN-5UNW3HN5 UNaI UN-
W5a Wa3UX / aHa3eN3-2B1HB5H UNU Ua WUW U-22 UN 3aI
I- -/a 5H5ea 1Ua2UNa UNW-2- -5aBXH W 5HX a3e-NUW -5
5ea 2 N a H2 Ua2UNa TN5 a 4SB 35 B 5H5aB UN-5a XH
XH UN - 2B a a-Be - a UN5ea p3UN5 HX5ea W5a -N
3H 12a5a a aB aN3 B1-UB5H5ea 1Ua2UNa -N B2-5aI X3U5aWUN
5ea apaN5HXWUW U-22 UN 3aI I- -/a

I MN UN W SpaN Ue 5ea U 12a aN5-5UNHX S
S -N S UN3H UN-5UN Ue 5ea U 12a aN5-5UN
HX S -N S H5e 5ea Na-B 4-N, N B-W
M 25-N H5eaB H5 IUV-N5-35pa X 2W-B 3-1- 2a HX1BH 3UN
WNU3-N5/ BH N W- UN -55ea 3HNVB 35UN-B- eUe 3H 2
a 1HW BH35VB 35 BASHW W-NU2I paBw aX35WapaN Ue
5ea U 12a aN5-5UNHX H aBNaN UNaBN -N 3HNVB 35UN
1B353aW, N B -UNW UN U35U 1-35W U2 a WNU3-N5-N
NpHU- 2a

a HN2 WUN ea 1HANU2U 1-35HX5ea BH35HNVB 35 BAW
-WBW5aI Ue WUW U / BH N W- UN UWWNU3-N5-N
NpHU- 2a

3 5a Ba HNVB 35UN, B-

S 2U2a X 2WUN5ea 4-N5, N RpaB3HNVB 35UN, B-
UNB2 IUN 4-N, N B-WM 25 3H 2 1BH 3a VBN WUW U / BH N
W- UN 5e-5 H 2 a 1HW VB 35 BASHW W-NU2-IpaBw aX35W

- HANU2T 1-35 ea BH353H 2 BAW2UN-IpaBw aX35W5H
VB 35 BAWW2UN XH WUW U / BH N W- UN ea 1HANU2
U 1-35HX5ea BH35HNVB 35 BAWWUW WAI UN5ea BXSSTR -5
1-/aW -N

T 1-35 BHBSH UJ-5UN HANU2 WNU3-N5

3 UJ-5UN a-WB ea BH35 U2UNBHEHB 5a UJ-5UN
a-WBW S S -N S UNW35UN
HX5ea BXSSTR eUe U2aNWB 5e-5 NUg aVBN
U2U 12a aN5WUW U B2-5aI B3H aN-5UNW3HN5 UNaI UN-

MN UN WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

W5a Wa3UX3 / aH5a3eN3-2B1HB5 ea B3H aN-5UJNW U2
UNU Ua WUW U-22 UN 3aI I- -/a SH5ea 1Ua20Na Ba UB
UNW-22-5UJNHX- -5aBXH W 5HX a3e-NW -55ea 2 N a H2
Ua20Na TN5 a 4B 35 Ba SH5aB UN 5a XH XZH UN - 2 Ba
a-Be - a UN5ea pUUN5 HX5ea W5a -N Ba UB 3H 12a5UJNHX
a aB aN3 Ba1-UBSH5ea 1Ua20Na -N Ba2-5aI X3U5UaWON5ea apaN5
HXWUW U-22 UN 3aI I- -/a

I MNI UN W SpaN U5e 5ea U 12a aN5-5UJNHX S
S -N S UN3H UN-5UJN U5e 5ea U 12a aN5-5UJN
HX S -N S 2U2a X 2WON5ea 4-N5 , N
RUpaB HNB 35UJN, Ba- UN2 I UN 5ea 4-N, N Ba-WM 25 HNa
3H 1 1BH 3a VBN WUW U / BH N W- UN 5e-53H 1 BaW25UN
W W-N5U2I- -/a SH BaNWH5RH-I 5ea HNWp-5UJN U5B35
Ua20Na -N 5ea 4-N5 , N RUpaB HNW Ua20Na , N
Ba -UNUN UNUB35U 1-35W U2 a W/NX3-N5-N N-pHU- 2a

a HN2 WJN ea 1HaN5U2U 1-35HX5ea BHa35HNWB 35 BaW
-WBU5aI U5e WUW U / BH N W- UN UWW/NX3-N5-N
N-pHU- 2a

I 4-N aB+B UNH -WN, Ba-

S Ue / BH N -5aB3HN 5UJNW3H 1 HB3 BUN5ea pUUN5 HX
apU2 -N HN 52a Ba -N U2 Ba 2B-5aI UN5ea XBa - HX5ea
4-N aB+B UNH -WN, Ba-

- HaN5U2T 1-35 ea BHa353H 1 BaW25UNeUe / BH N -5aB
3HN 5UJNWON5ea 4 , ea 1HaN5U2U 1-35WIX5ea BHa35HN
5ea 2apa2HX / BH N -5aB-Ba I U5W WAI UN5ea B XSTR -51-/a
-N UN5ea MN-2STR -51-/aW SH

T 1-35 BHBH UJ-5UJN HaN5U22 W/NX3-N5

3 UJ-5UJN a-WBa ea BHa35 U2UN3HEI HB 5a UJ-5UJN
a-WBa S UN4a35UJN HX5ea B XSTR eUe
U2Ba UB 5e-5 NUG aWaBNU 12a aN5- / BH N -5aB2apa2
HNSHBW 1BH B WJ I-5 XH TN a g a2WMU Ba UN
5ea B XSTR eUWONXB -5UJN U2 a WAI UN3HN N5UJN U5e
XB3-VWX / BH N -5aB2apa2W aBpaI XH NUG aWaBN
UN5a / B 5aI WBX3a -N / BH N -5aB Ha2W5HUaNSX SaN WON
/ BH N -5aB2apa2W-N UaNSX 3e-N aWU Ba352 -5BU 5- 2a SH5ea
BHa35 H5ea a 5aN5Xa-WU2a / UpaNa U5UW UNXB WB 35 Ba -N
3HNW5aN5 U5e aa5UN H5eaB -WN -N / a aN5H a35UpaW
NUG aWaBN U2IUB35 BHa35 -5aBWBa-I UN SH2U U5eUe
/ BH N -5aB3HN 5UJNWON5ea pUUN5 HX apU2 -N HN 52a
Ba U2 Ba -N -Ba- WON5ea XBa - -N UN5aB aI U5a -Ba- HX

MNI UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UJNW
-Be

Tg S4 SR S T T -/a

5ea 4 ,

I MNI UN W ea U 12a aN5-5UNHX- / BH N -5aB2apa2 HNSHBN
1BY B U2U UeUe / BH N -5aB3HN UNW 5-5U aW
I BN BH a35HlaB 5UNW/ BH N -5aB3HN UNW - VU2HB3 B
UeUN Xa5HX5ea / BH N WBX3a , N Ba -UNU U 1-35W U2
a WUNX3-N5-N N-pHU- 2a

a HN2 WUN ea 1HfANU2U 1-35HX5ea BH a35HN/ BH N -5aB
2apa2WUWUNX3-N5-N N-pHU- 2a

S BH a35 Ba2-5aI / BH N -5aB2apa2W UeUN5ea UNaB aI U5a
-Ba- HX5ea 4-N aBN B UNH -WN, Ba- H 2 2B-2 BW UeUN- I aI5e HX
Xa5HX5ea / BH N WBX3a

- HfANU2T 1-35 ea BH a353H 2 BaW25UN- BW HX/ BH N -5aB
2apa2WUN5ea 4 , ea 1HfANU2U 1-35WHX5ea BH a35HN 2B-2
/ BH N -5aB2apa2W Ba I U5 WAI UN5ea B XSTR -51-/ aW
-N -N UN5ea MN-2STR -51-/ a

T 1-35 BHBSH UU-5UN HfANU2 WUNX3-N5

3 UU-5UN a-WBa ea BH a35 U2UN8HB HB 5a UU-5UN
a-WBa S UN4a35UN HX5ea B XSTR eUe
U2Ba Ua 5e-5 Nug aVaNu 12a aN5- / BH N -5aB2apa2
HNSHBN 1BY B UN I-5 XH TN a g a2WMU Ba UN
5ea B XSTR eUWUNHB -5UN U2 a WI UN3HN NB5UN Ue
XB3-VWHX/ BH N -5aB2apa2W aBpaI XH Nug aVaN
UNa/ B 5aI WBX3a -N / BH N -5aB H a2W5HU aN5X 5a N WUN
/ BH N -5aB2apa2W-N UaN5X 3e-N aW Ua352 -5BU 5- 2a 5H5ea
BH a35 H5ea a 5aN5Xa- W2a / paNa UNUN UNB VB 35 Ba -N
3HNWaN5 Ue aa5UN H5eaB -WN -N/ a aN5H a35paW
Nug aVaN U2I Ua35 BH a35 -5aBWBa-I UN SH2U UeUe
/ BH N -5aB3HN UNWUN5ea p3UN5 HX apU2 -N HN 5a
Ba U2 Ba -N -Ba- WUN5ea XBa - -N UNaB aI U5a -Ba- HX
5ea 4 ,

I MNI UN W ea U 12a aN5-5UNHX- / BH N -5aB2apa2 HNSHBN
1BY B U2U UeUe / BH N -5aB3HN UNW , 2eH/ e -5aB
2apa2W H 2 BW NaB5ea BH a35 2apa2W H 2 1BaIH UN-5a2
Ba -UN-5- I aI5e / Ba-5aB5e-N Xa5 a2H 5ea / BH N WBX3a -N
BH a35 Ba2-5aI / BH N -5aB2apa2W H 2 HNS BaW25UN2aW5e-N
WUNX3-N5-N aNaX3U2U 1-35W H apaB 2B-2UaI W-2H
/ BH N -5aB3HN UNWUN3H 2 BaW25UN WUNX3-N5U 1-35W , N
Ba -UNU U 1-35W U2 a WUNX3-N5-N N-pHU- 2a

a HN2 WUN ea 1HfANU2U 1-35HX5ea BH a35HN/ BH N -5aB

MNI UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/ a

2apa2WUWU/NX3-N5-N N-pHU- 2a

S 4 WJaNBa B 5aWUNa 3aWVHX X B H 2 HB3 BUN5ea
BaWVBa HNa XH g 5Hg

- HaN5U2T 1-35 ea BHa353H 2 BaW25UNW WJaNBa B 5aWUN
a 3aWVHX X BUN5ea BaWVBa HNa XH g 5Hg
ea 1HaN5U2U 1-35WVHX5ea BHa35HN5ea BaWVBa HNa
Ba2 5aI SHW WJaNBa B 5aWVHX g 5Hg -Ba
IUV WVI UN5ea BXSTR -51-/a

T 1-35 BHB3H UU-5UN HaN5U2 W/NX3-N5

3 UU-5UN a-WBa ea BHa35 U2UN3HB HB 5a UU-5UN
a-WBa S IUV WVI UN4a35UN HX5ea BX
STR e3e U2aNWBa 5e-5 NUG aVaN UN2U 12a aN5-
/BH N -5aB2apa2 HNSHBV 1BH B -N IUB35 BHa35 -5aB
WBa-IUV SHU U1HaN5U2XBW WJaNBa UN5ea BaWVBa HNa
-Ba- HX5ea 4 , ea 1BH B U2 a U 12a aNaI WVI I-5
XH TNa g a2WVU Ba HX5ea BXSTR ea UNXB -5UN
U2 a WVI UN3HN N5UN Ue XH3-VSHX/BH N -5aB2apa2W
IaBpaI XH NUG aVaNUN5a/B 5aI WBK3a -N /BH N -5aB
Hi a2VSHUaN5X 5aN WUN/BH N -5aB2apa2W-N UW2 5a 3e-N aW
-5BU 5- 2a SH5ea BHa35 H5ea a 5aN5Xa-WU2a /UpaNa UUV
UNXB VB 35 Ba -N 3HNW5aN5 Ue aa5UV H5eaB -WV
-N/a aN5H a35UpaW NUG aVaN U2IUB35 BHa35 -5aB
WBa-IUV SHU U1HaN5U2XBW WJaNBa UN5ea BaWVBa HNa
-Ba- HX5ea 4 ,

I MNIUVW , 2eH /e - X22UN/BH N WBK3a a2ap-5UN H 2 5- a
12 3a NaB H BHa35-N BHa353HN UUNW/Ba-5aBW WJaNBa
H 2 HB3 B NaB BHa353HN UUNW-5- B 5a a 3aI UN
W/NX3-NBa 3B5aBJ , 2eH /e 5ea U 12a aN5-5UNHX a-WBawH
IUpaB -5aBW112aVSH -B W WJaNBa 1BHNa -Ba-W U2BaI 3a
5ea U 1-35WW WJaNBa - V22HB3 B-5- B 5a UNa 3aWVHX5ea
W/NX3-NBa 3B5aBJ , N Ba -UNU U 1-35W-Ba W/NX3-N5-N
N-pHU- 2a

a HN2 WVN ea 1HaN5U2U 1-35HX5ea BHa35HNW WJaNBa UN
5ea BaWVBa HNa -Ba- UWU/NX3-N5-N N-pHU- 2a

D. AIR QUALITY

BHa35 HNB 35UN

- 4apaN - W - -N RaVpHUB 4-N5 , N RUpaB apU -N HN-N 5a
Ba HNB 35UN, Ba-W

MNIUV WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

, S UWFHWH 3HNSB 35UJN-35pUaW H 2 a 3aaI I-U
-N 3-2a-N-B -BaB4 , a UWFHWHUWXG-NBa 5eBaWHI WXBR
R -N

- HaN5U2T 1-35 ea BH353H 2 BaW2UNa 3aaIaNbaWHX
4 , a UWFHWHUWXG-NBa 5eBaWHI WXBR -N
ea 1HaN5U2U 1-35WHX5ea BH35HN-UB -25 XBR
-N a UWFHWHUWXG-NBa 5eBaWHI WXBR -51-/a

T 1-35 BHBSH UJ-5UJN HaN5U2 WNUXG-N5

3 UJ-5UJN a-WBa ea BH35 U2UNBHI HB 5a UJ-5UJN
a-WBaW , -N , UN4a35UJN HX5ea
BXSTR e3e U2Ba UB Nug a5aBN5HaNBH B/a 5ea
3HNSB 35B5H W a 2W2aI I UaW2Xa2UN3HNSB 35UJNa U aN5
eaBa Xa-W2a-N aNBH B/a 5ea 3HNSB 35B5H W 5ea Na aW
I UaW21H aBaI a U aN5-p-U 2a W HX5eUW 2aBN 5pa I UaW2
Xa2 H 2 BaI 3a a UWFHWH 1aBaN5XH 3HpaN5UJN-2
I UaW2

I MNUUW ea WHXa 2W2aI I UaW2Xa2UN-21BHIHMI
3HNSB 35UJNa U aN5 H 2 W W-N5U2 BaI 3a - U I-U
a UWFHWHX-2HX5ea 1H2 5-N5W H apaB a UWFHWHXR
-N H 2 W2a 3aaI 4 , 5eBaWHI W-N
5eBaXH Ba -UNWNUXG-N5-N N-pHU- 2a Nug a5aBNe-pa
a2U UN 5aI XH 5ea BH355ea Ba2B-5UJNHX- Ua W35UJNHX5ea
4 S -33aWBHI -UB -25 U 1-35W2H 5eUa2a aN5I W2I
UN5ea BXSTR U25eaBaXH NH2HN aBH3 B ea a2U UN 5UJNHX
5ea 1Ba- Ba2B-5UJNHX5ea 4 S -33aWBHI -W BH35
a2a aN5 H 2 aW2NT 1-35, 5U H 2 Ba -UNWNUXG-N5
-N N-pHU- 2a

a HN2 WJN ea 1HaN5U2U 1-35HX5ea BH35HNa UWFHWHX
R -N UWFHWHUWXG-N5-N N-pHU- 2a

E. CULTURAL AND PALEONTOLOGICAL RESOURCES

BH35 HNSB 35UJN

- 4-N5 , N RUpaB HNSB 35UJN, Ba-

R HNSB 35UJNHX5ea 2 Na H2 Ua2Na e-WT H 2 3- W-
W W-N5U2-IpaBa 3e-N a UN5ea WNUXG-NBa HX5ea MBNBOW 52a g aUB
- - 1HaN5U2 WNUXG-N5eUWHB3-2BaWI Ba -W a2NaI UNW35UJN
HX S ,

MNUUW WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UJNW
-Be

Tg S4 SR S T T -/a

- HfaNSU2T 1-35 ea BHa353H 2 BaW25UN-N-IpaBW 3e-N a UN
5ea W/NX3-NBa HX5ea MB NBOW 52a g aUB - - 1HfaNSU22
W/NX3-N5eUWHB3-2BaWI Ba ea 1HfaNSU2U 1-35WHX5ea BHa35
HN5ea MB NBOW 52a g aUB - Ba2-5aI SH e-W T3HNMB 35UN
-35pUaW-Ba IUW Wai UN5ea BXSSTR -51-/a

T 1-35 BUBSH UJ-SUN HfaNSU22 W/NX3-N5

3 UJ-SUN a-WBa ea BHa35 U2UNBHEHB 5a UJ-SUN
a-WBa R UN4a35UN HX5ea BXSSTR eUe
U2aNBa 5e-51BH Hwi 3HNMB 35UN U2-pHU 1e W3-2U 1-35W
SH5ea MB NBOW 52a g aUB - SH5ea a 5aNSXa-WJ2a TN5ea apaNS
5e-5-N 1HBUH HX5ea MB NBOW 52a g aUB - H 2 a
HI Uai HBIa H2Uai - -2Uai -BeUa35 B2eUWHBN U2
1Ba1-Ba - eUWHB3-2Ba3HB -SUNHX5ea MB NBOW 52a g aUB - UN
5ea 3HN5a 5HX5ea HNBp-SUN UWHB35 W BH N -5aBWBa-IUN
WVa ea Ba3HB-SUN U23HNXB SH5ea W-N-B WHXaU5eaB5ea
UWHB3, aB3-N UUN W4 Pa HB5ea UWHB3, aB3-N
SN UaaBN Ra3HB

I MNI UN W TX1BH Hwi 3HNMB 35UNI a H2UaWB -5aB22 -N
-IpaBW 2-2aB5ea 1e W3-23e-B 35aBWB3W5e-53HNpa 5ea
eUWHB3-2W/NX3-NBa HX5ea MB NBOW 52a g aUB - WUX UN
UWNB2 WHNH Hba2U/UU5 XBUN2 WHNH 5ea -2XBNJ
Ra/UWB B U H 2 a - W/NX3-N5U 1-35 a1aN UN HN2
aN UaaBN IaW/NWXB5ea BHa35 U - aNa3aWB SH
Ia H2U 5ea aNUa eUWHB3 UN5 a WB 35 Ba -N aUB S 5aNWpa
HI UX3-SUNHX5ea a UUN UN5 a WB 35 Ba HB1e W3-2Ia H2SUN
HX5ea aNUa UN5 a WB 35 Ba HB aUB H 2 U 1-UBHB3H 12a5a2
Ba Hpa 5ea Ba -UNUN UN5-351HBUHWHX5ea MB NBOW 52a g aUB
- 4eH5HX1BaWp-SUN -p-U2 2a UJ-SUN a-WBaW U2
BaI 3a 5NH5a2U UN5a U 1-35WHX1a H2SUN, N Ba -UNUN
U 1-35W U2 a W/NX3-N5-N N-pHU- 2a

a HN2 WUN ea 1HfaNSU2U 1-35HX5ea BHa35HN5ea MB NBOW
52a g aUB - UWW/NX3-N5-N N-pHU- 2a

R HNB 35UNHX 2 Na H2 Ua2Na H 2 3- W - W WNSU2
-IpaBW 3e-N a UNW/NX3-N5HX5ea MB NBOW 52a g aUB - - 1HfaNSU22
W/NX3-N5eUWHB3-2BaWI Ba

- HfaNSU2T 1-35 ea BHa353H 2 BaW25UN-N-IpaBW 3e-N a UN
5ea W/NX3-NBa HX5ea MB NBOW 52a g aUB - - 1HfaNSU22
W/NX3-N5eUWHB3-2BaWI Ba ea 1HfaNSU2U 1-35WHX5ea BHa35
HN5ea MB NBOW 52a g aUB - Ba2-5aI SH e-W TIT3HNMB 35UN
-35pUaW-Ba IUW Wai UN5ea BXSSTR -51-/a

T 1-35 BUBSH UJ-SUN HANUJ2 WUNX3-N5

3 UJ-SUN a-WB ea BHa35 UUNBHE HB 5a UJ-SUN
a-WB R UN4a35UN HX5ea BXSTR e3e
UaNBW 5e-51BH HMI 3HNB 35UN U2-pHU le W3-2U 1-35W
SH5ea MBNUW 52a g aUB - SH5ea a 5aN5X-WJ2a TN5ea apaN5
5e-5-N 1H5UNHX5ea MBNUW 52a g aUB - H 2 a
HI UaI HBIa H2UaI - -2UaI - BeU5a35 B2eU5HUN U2
1B1-B - eU5HB3-2B3HB-SUNHX5ea MBNUW 52a g aUB - UN
5ea 3HN5a 5HX5ea HNWp-SUN U5B35 W BH NI -5aBWB-IUN
W5a ea B3HB-SUN U23HNXB SH5ea W-N-B WHXaU5eaB5ea
U5HB3, aB3-N U UN W4 pa HB5ea U5HB3, aB3-N
SN UNaBN Ra3HB

I MN UN W TX1BH HMI 3HNB 35UN I a H2UaWB -5aB2 -N
-IpaB2 -2aB5ea le W3-23e-B35aB53W5e-53Hpa 5ea
eU5HB3-2WUNX3-NBa HX5ea MBNUW 52a g aUB - WUK UN
UWNB2 WHNH HBa2U/U25 XIBNB2 WHNH 5ea -2XIBU
Ra/U5B B U H 2 a - WUNX3-N5U 1-35 aIaN UN HNX2
aN UNaBN I a WUNWXB5ea BHa35 U5 - a Na3aWB SH
Ia H2U 5ea aN5Ua eU5HB3 UN5 a VB 35 B -N aUB S 5aN5pa
HI U3-SUNHX5ea a U5UN UN5 a VB 35 B HBle W3-2Ia H2SUN
HX5ea aN5Ua UN5 a VB 35 B HB aUB H 2 U 1-UBHB3H 12a2
B Hpa 5ea B -UNUN UN5-351H5UNW5X5ea MBNUW 52a g aUB
- 4eH5HX1B Wp-SUN -p-U2 2a UJ-SUN a-WB W U2
B1 3a 5N5a2U UN5a 5ea U 1-35WHX1a H2SUN

a HN2 WHN ea 1H5ANU2U 1-35HX5ea BHa35HN5ea MBNUW
52a g aUB - B2-5aI SH e-W TIT3HNB 35UN-35pU5aWOW
WUNX3-N5-N N-pHU- 2a

F. NOISE

BHa35 HNB 35UN

- 4-N5, N RpaB HNB 35UN, B-

T HNB 35UNHX5ea 2 N a H2 Ua2Na 3H 2 a 1HW
B aW aN5Na-B B aNWH5RH I SHUNB a-WUN- UaN5NHUW 2apa2W
a 1HB B INUNB a-WHX H 5e-N I, 3H 2 B U5 5ea 2apa2WH
H 5e-N I,

- H5ANU2T 1-35 ea BHa35H 2 a 1HW B aW aN5Na-B
B aNWH5RH I SHUNB a-WUN- UaN5NHUW 2apa2W ea 1H5ANU2
U 1-35WHX5ea BHa35HN- UaN5NHUW 2apa2W a SH3HNB 35UN
HX5ea 2 N a H2 Ua2Na -B I U5 WMI UN5ea BXSTR -51-/a

MN UN WESTR XB4-N5, N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

UJ-5UN a-WB ea BH35 U2UNBHB5a UJ-5UN
a-WBW T UN4a3UN HX5ea B XSTR eUe
U2B UB 5ea BH351BH1HN5WUaNUX - 3HNB 35UNNUW
HNSB eH U2 a BWHNU2a XBHpaBWAUV 5ea 3HNB 35HBW
U 12a aN5 UNHXNUW UJ-5UN a-WBW-N Wpa-W 1HNS
HX3HN5-35XBNUW 3H 12-UN5W HNB 35UN-35pUaW U2 a
2U UaI 5H HN- 5eH /e MBJ- a5 aaN - -N 1
H3HNB 35UN U2HB3 BHN aa aN WBeHJ- W HUW
/aNab 5UN 3HNB 35UNa U aN5 U2 a 2W5e-N a-BWJ
HBUXH2 aB U2N5/aNaB 5a eUeaBNHUW 2apa25e-NNa 2H NUW
/aNab 5UN a U aN5 HNB 35UNa U aN5 U2 a
-33aWBWUaI Ue 5ea -N X35 BVB3H aNaI NUW
-5aN -5UNI apUaWW3e -WNI X2aBWBW2X-I VUN
-3 1-2-B W-N a-11BHBU5a2 -UN5-UNaI TNNHUW WNU5pa
-B-W5a 1HB B NUW -BWBW U2 a 2B-5aI -BH N eUe NUW
/aNab 5UN a U aN5 2-3a aN5HX3HNB 35UNa U aN5
I BN 5U aWHXHaB 5UN U25- a UNH-33H N55ea 2B-5UNHX
NUW WNU5pa B3a15BWg eaB NUW 2apa2W-Ba a 1a35aI 5H a
eUe BWAUN5W UeUN5ea pUUN5 HX3HNB 35UN-35pUaW U2 a
/paN B5aNNH3a UN-1p-Na UN 3-5UN 5ea a 1a35aI I B 5UNHX
5ea -35pUaW

3 MNUVW HNB 35UNHX5ea 2 Na H2 Ua2Na 3H 2 a 1HW
BWAUN5Na-B BaNW5RH1 5HUBa-WWUN- Ua5NUW 2apa2W
, WW UN -3 /BH N NUW 2apa2-55ea 3HNB 35UNW5a UW
I , 5a 1HB B UNB-WWHX Ha 5e-N I , 3H 2 BUV 5ea
2apa2WH Ha 5e-N I , RaWUN5W3HW 5H5ea 3HNB 35UN
W3e -WNa-B5ea aVBN5aB UN WHX5ea 2 Na H2 Ua2Na U2
a 1aBaNa WNX3-N5U 1-35W aWU5a 5ea U 12a aN5 UNHX
UJ-5UN a-WB5e-5 U2BaI 3a NUW U 1-35W eUWU 1-35W
WNX3-N5-N N-pHU- 2a

I HN2 WUN ea 1HaNU2U 1-35HX5ea BH35HNNUW 2apa2WU
WNX3-N5-N N-pHU- 2a

apU2 -N HN HNB 35UN, B-

T ea apU2 -N HN -WW Ua2Na 3HNB 35UN-35pUaW
3H 2 3B-5a IN2apa2W-5Na-B BWAUNaWUNa 3aWHX I , -N
UNB-W NUW 2apa2W Ha 5e-N I ,

- HaNU2T 1-35 ea BH353H 2 3B-5a UNB-WI NUW 2apa2W
-5Na-B BWAUNaW ea 1HaNU2U 1-35WHX5ea BH35HNNUW
2apa2W2-5aI 5H apU2 -N HN 1-WW Ua2Na 3HNB 35UN
-35pUaW-Ba I U5W WNI UN5ea B XSTR -51-/a

UJ-5UN a-WB ea BH35 U2UNBHB5a UJ-5UN

MNUV WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

a-WB W T I UY W I UN4a3SUN HX5ea BX
STR eUe U2B Ua 5ea BH351BH1HN5W5HUaNSX -
3HNSB 3SUNNHUW HNSB eH U2 a BWHNW2a XBHpaBvaUV
5ea 3HNSB 3SBWU 12a aN5 SUNHXNHUW U5U-SUN a-WB W-N
WBa -W 1HNSHX3HNS 35XBNHUW 3H 12-UN5W U5U-SUN U2
2U U3HNSB 3SUN-35pUaW5H HN- 5eH /e MBU- a5 aaN
- -N 1 H3HNSB 3SUN U2HB3 BHN aa aN W
HBeHU- W HUW /aNab 5UN 3HNSB 3SUNa U aN5 U2 a 2aW
5e-N a-BWU HBXHZ aB U2N5 /aNab 5a eUeaBNHUW 2apa2
5e-NNa 2H NHUW /aNab 5UN a U aN5 HNSB 3SUN
a U aN5 U2 a -33aWBaI Ue 5ea -N X35 BaW
Ba3H aN aI NHUW -5aN -SUN I apUaWW3e -WH NI X2aBWB
W2X-I WUN -3 1-2-B W-N a-11BH1BU5a2 -UN5-UNaI TN
NHUW WNW5pa -Ba-W5a 1HB B NHUW -BaBW U2 a 2B-5aI
-BH NI eUe NHUW /aNab 5UN a U aN5 23a aN5HX
3HNSB 3SUNa U aN5I BN 5U aWHXHaB 5UN U25- a UN5H
-33H N55ea 2B-5UNHXNHUW WNW5pa Ba3a15BWg eaBa NHUW
2apa2WBa a 1a35aI 5H a eUe -Ip-NBaI -BNV UN B5UN U2 a
/paNSHBaW aNSW UeUN5ea pUN5 HX3HNSB 3SUN-35pUaW
UN U-5UN 5ea a 1a35aI I B SUNHX5ea -35pUaW

3 MNI UN W HNSB 3SUNHX5ea 1BH1HWI apU2 -N HN -W
Ua2UNa H 2 2-W- Xa HN5eW-N 1BH 3a -N5Ua- 2a NHUW
U 1-35SHB W aNBaW2B-5aI 5H5ea aWHX5ea 3HNSB 3SUN-Ba-
eaBa 5ea Na-BaV eH W UW 11BH U -5a2 Xa5- - BN
3HNSB 3SUN-35pUaWNHUW 2apa2WBH 2I a -WeUe -W I ,
I BN 5ea SBNeUN 1e-W , 2eH /e SHH B 1eU-2Xa-5 BaW-N
Iapa2HI aN5 -2WBH 2I BaI 3a 5ea NHUW 2apa2W5ea UNBa-W UN
NHUW 2apa2W H 2I a 3aI I -N 3H 2I 1HfaNSU2 Ba-3e 5ea
WNUX3-NBa 3B5aBNHX I , 11BH U -5a2 -IH aNeH W W
H 2I a HW-Xa35aI 5eUM-BHX BH353HNSB 3SUN , N
Ba -UNV U 1-35W U2 a WNUX3-N5-N N-pHU- 2a

I HN2 WUN ea 1HfaNSU2U 1-35HX5ea BH35UW WNUX3-N5-N
N-pHU- 2a

3 5a Ba HNSB 3SUN, Ba-

T HNSB 3SUNHX5ea H aB 5a Ba -N -35 W -WNV
1Ua2UNaWBH 2I 3Ba-5a NHUW 2apa2W-5Na-B BaW aNBaWNa 3aWHX
I , -N UNBa-W NHUW 2apa2W Ha 5e-N I ,

- HfaNSU2T 1-35 ea BH353H 2I 3Ba-5a UNBa-WI NHUW 2apa2W
-5Na-B BaW aNBaW ea 1HfaNSU2U 1-35WHX5ea BH35HN NHUW
2apa2WBa2-5aI 5H3HNSB 3SUNHX H aB 5a Ba -N -35 W
-WNV Ua2UNaW-Ba I UY W I UN5ea BXSTR -51-/a

MNI UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

Tg S4 SR S T T -/a

U-5UN a-Wa ea BHa35 U2UNBHB5a U-5UN
 a-WaW T I W Wai UN4a35UN HX5a BX
 STR e3e U2Ba Ua 5ea BHa351BHIHN5W5HUaN5X -
 3HNSB 35UNNHUW HN5HB eH U2 a BWHNW2a XBHPaBWAU
 5ea 3HNSB 35B WU 12a aN5 5UNHXNHUW U-5UN a-WaW-N
 Wpa -W 1HN5HX3HN5 35XBNHUW 3H 12-UN5W U-5UN U2
 U 3HNSB 35UN-35pUaW5H HN- 5eBI / e MBJ- a5 aaN
 - -N 1 H3HNSB 35UN U2HB3 BHN aa aN W
 HBeHU- W HUW / aNaB 5UN 3HNSB 35UNa U aN5 U2 a 2aW
 5e-N a-BWZ HBXHZ aB U2N5 / aNaB 5a eUeaBNHUW 2apa2
 5e-NNa 2H NHUW / aNaB 5UN a U aN5 HNSB 35UN
 a U aN5 U2 a -33aWBWJaI Ue 5ea -N X35 BaW
 Ba3H aNaI NHUW -5aN -5UNI apUaWW3e -WWI NI X2aBWB
 W2X-I WUN -3 1-2-B W-N a -11BIBU5a2 -UN5 UNaI TN
 NHUW WNW5pa -Ba-W5a 1HB B NHUW -BaBW U2 a 2B-5aI
 -BHI eUe NHUW / aNaB 5UN a U aN5 2-3a aN5HX
 3HNSB 35UNa U aN5I BIV 5U aWHXHaB 5UN U25- a UN5H
 -33H N55ea 2B-5UNHXNHUW WNW5pa Ba3a15BWg eaBa NHUW
 2apa2W-Ba a 1a35aI 5H a eUe -Ip-NBaI -BNUN UN B5UN U2 a
 / paN5HBW aN5W UeUN5ea pUUN5 HX3HNSB 35UN-35pUaW
 UN 3-5UN 5ea a 1a35aI I B 5UNHX5ea -35pUaW

3 MNUNW ea 3HNSB 35UNHX5ea 1BHIHWI H aB 5a Ba
 Ua2Na H 2 N5-IpaB2 U 1-35NHUW WNW5pa Ba3a15BW ea
 1BHIHWI -2UN aN5HX5ea -35 W -WNW Ua2Na e3e U2B-5aI
 UN5ea U HXRU2H H 2 a 2B-5aI UN UNaN, paN a g aW
 4 U, paN a aI-B, paN a g aW -W-2 45Ba5 -N 41B 3a
 , paN a ea U HXRU2He-W HUW S2a aN5 UN5W aNaB 2
 2N 5NHNB UN-NBa e-W aaN1-Wai -11BaWN 3HNSB 35UN
 NHUW 455a S , / Ua2NaWBpUa 5e-5- 5a 1HB B W W-N5U2
 UNBa-W - a 3HNW aBaI WNU3-N5 , 2HN 5ea BI 5a HX5ea
 1Ua2Na UNRU2H -11BH U -5a2 eH aWe-pa -2W5e-5 Wpa
 -WNHUW -BaBWXB5X3 -N 1HaNU23HNSB 35UNWNHUW
 42Ue2 Xa aBeH WWX3a HNH5ea W5a5-N e-pa NHNHUW
 -5aN -5UN -2W ea N aBHXBaW aNaW5e-5 - a
 Na/ -5pa2 -X35aI 3H 2 a 5eBa 5HXpa 5U aW-W -N
 IalaNUN HN25IaI5eW-N BHI U5eW, 2B -23-N
 1BpUa- 5H I BaI 35UNUNNHUW 2apa2W-5- eH W
 IalaNUN HN5ea eaUe5-N 3HNSB 35UNHX5ea -22 5ea 2B-5UN
 HX5ea eH W -N Ba- WUN5ea -22 TN-11 5UN5H5ea -5aN -5UN
 HXNHUW 2apa2W a 5HI UN5-NBa -5aN -5UNW - BaW25XH 5ea
 N aBHXBH WXeH W-W-N -11 5UN-2 -2W alaNUV 1HN
 5ea IaNW5 HX5ea eH W-W-N-11 5UN-2 I BaI 35UN - a
 H 5-UNaI 5ea XB5BH HXeH W-W-N I XB-11 5UN-2BH W
 1 5H- - U HX I g -2W-BH N 5ea W3HN -N
 -11 5UN-2BH WXeH W-W H 2 XBeaB-U UNBaI 3UN 5ea NHUW

MNUNWESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
 -Be

2apa2W N-paB/a HNa HB5 H XH52aN 5eWHX1Ua H 2I a
 UNV-2aI 1aBI- -N 5ea /Ba-5aWU 1-35 H 2I aI BN 5ea HB
 I- W5e-55ea 3Ba UW HB UN HN5ea VBa5UNXH5HX- /paN
 eH W g 5eH 5- NHUW -5aN -5UN -22 5ea NHUW 2apa2 - a
 -11BH U -5a2 I , -5 Xa5XH 5ea U aIU5a2 -I -3aN5
 eH aW g 5e - -22 5eUW - aBaI 3aI I , , 5 HBW
 5eH 5- -22 -5- B5a HX5 H XH5W35UNWHX1Ua 2-U 1aB
 I- U5 - 5 aHpaB5 H aa W5H 5ea 5U a5e-55ea NHUW 2apa2W
 BW- Hpa I , 5H eaN5ea X22 a2H I , -5-N /paN
 eH a HUW U 1-35WUN5eUW3HN5B 35UN-Ba- H 2I a WUNX3-N5
 a3- W 5ea BaWUaN5W H 2I a a 1HMI 5H- W VNSU25a 1HB B
 UNBa- W UN- UaN5NHUW 2apa2W , N Ba -UNU U 1-35W U2 a
 WUNX3-N5-N N-pHU- 2a

I HN2 WUN ea 1HaNU2U 1-35HX5ea BHa35HNHNUW 2apa2W
 -WBU5aI 5e 5ea 3HN5B 35UNHX H aB 5a Ba -N -35 W
 -WNUUa2NaWUWUNX3-N5-N N-pHU- 2a

G. HAZARDOUS MATERIALS AND GROUNDWATER CONTAMINATION

BHa35 1aB 5UN-N -UN5aN-NBa

- 4-N aB-B UNH -WN, Ba-

, 41-5U2a 5aN5HX5ea 1aBe2HB 5a 3HN5 UN-5UNXH5I BN5
 NaB-22 BHa35 WaN-BUWUW Ba-5aB5e-N5e-5 NaB H BHa353HN 5UNW
 g eaN3H 1-BaI 5H5ea H BHa35 5ea N aBHx a2W3HN5 UN-5aI
 1aBe2HB 5a NaB-22 BHa35 WaN-BUWUa 3aal W5ea N aBHx a2W5e-5
 -pHU 3HN5 UN-5UN

- HaNU2T 1-35 ea BHa353H 2I BaW25UN3HN5 UN-5UNHX
 a2W 1aBe2HB 5a ea 1HaNU2U 1-35WHX5ea BHa35HN
 1aBe2HB 5a 3HN5 UN-5UNHX a2W-Ba IUW WMI UN5ea BXSSTR
 -51-/a -N UN5ea MN-2STR -51-/aW 5eH /e

5U-5UN a-WBaW ea BHa35 U2UN3HBI HB 5a 5U-5UN
 a-WBa , UN4a35UN HX5ea BXSSTR eUe
 U2aNWBa 5e-5 NUg aV5aBN U2IUa35 BHa35 -5aBWBa-IUN
 5HU 5-IpaBW 12 a Hpa aN5W5H5ea a 5aN5Xa-WU2a /paN
 a UNUN UNB VB 35 Ba -N 3HNW5aN5 5e aa5UN H5eaB -WN
 -N/a aN5H a35paW WN -p-U2 2a I-5 UN3HN NB5UN 5e
 5ea UN5a/B 5aI WBK3a -N /BH N -5aB H a2W NUg aV5aBN U2
 UaN5X /BH N -5aB5aBN WUN32 IUW 12 a Hpa aN5-N
 UW2 5a 3e-N aW-5BU 5- 2a 5HU 12a aN5-5UNHX5ea BHa35 ea
 BHa35 U2-2MUN3HBI HB 5a , -W aV5aBUaI UN5ea MN-2
 STR -51-/a eUe Ba UaW NUg aV5aBN5H - a-N
 -2aB-5pa -5aBW112 -p-U2 2a 5H1-BaW-Xa35aI

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
 -Be

Tg S4 SR S T T -/a

3HN5 UN 5aI a2W5H5ea a 5aN5-N XB5ea I B5UN5e-55ea
3HN5 UN 5UNW3- WI BHa35HlaB5UNWHB1BpUa
5a-5 aN5XB- Xa35aI a2W-5 NUg aVaBN WI U5B5UN ea
-2aBN 5pa W112 HB5a-5 aN5XB- Xa35aI a2W U2 a -Ia
-p-U2 2a XB-25U aW eaN1aBUNa5 -5aB -25 W5N-BW Ba
a 3aal aI -W BaW25HX5ea BHa35

3 MIN UN W , WI U5 WI UN W35UN HX5ea B X5STR
Ba2 5pa2 2-B a -Ba- WHX1aBe2HB 5a 3HNBaNB 5UNW Ba 1BaWN5UN
/BH N -5aBUN5ea 4 , UN2 I UN 5ea RaI 2-N W B XHN 2 a
ea -paB/a a 5aN5HX5ea XH5I BN5HX5ea RaI 2-N W B XHN12 a
BN aWXH SH -3BaW Ba-5aB NaB BHa353HN 5UNW5e-N
NaB H BHa353HN 5UNW ea Na5N aBHX a2W
3HN5 UN 5aI I a SH BHa35U 12a aN5 5UN 3H 1-BaI SH NaB
H BHa353HN 5UNWp- BaW a5 aaN -N a3- W 5ea
H N -BaWHX5ea 1aBe2HB 5a 3HNBaNB 5UN12 a - 3HN5UN a
a HN e-55ea H 2 a NaB H BHa353HN 5UNWU 1-35W
H 2 Ba -UNWUNX3-N5-N N-pHU- 2a apaNX2ZH UN
U 12a aN5 5UNHX5ea U5U-5UN a-WBaW T 12a aN5 5UNHX
U5U-5UN a-WBaW U2BaI 3a U 1-35W 5 - N5a2U UN 5a
3HN5 UN 5UNHXUN pU -2 a2W

ea UN pU -2BaWHNW SH- 3H aN5 5ea a1-B5 aN5HX H U
4 W5NaW HNB2 4 HN1-/a HX5ea MN 2STR -W
UN3HNW5aN5 U5e 5ea MN 2STR W ea -53 BaWHNW eUe
HX5aI - BH I aBI U5 WUNHXa Xa35WN3HN5 UN N512 aW
RaWHNW SH3H aN5 4 -W5eaBaXB UNaBHB ea X5W
X221-B/B1e HX5e-5BaWHNW WH 2 Ba-I 3e-N aWUN
WBUa5eBH /e NaBUNa XB

4aa ea -53 RaWHNW W35UN U5U-5UN a-WBa
, U2 a -112aI SH-pHU -N 2U U-IpaBa 12 a
Hpa aN5W M5eaB -WI HN3H aN5WBa3aIpaI I BN BpIa
HX5ea B X5STR NUg aVaBNe-pa Iapa2HlaI -II 5UN-2
U5U-5UN a-WBaW aWNaI SH-pHU WUNX3-N5U 1-35W Ba2 5aI
SH-IpaBa 12 a Hpa aN5 Wa a2H H apaB UN-II 5UN SH
-112 UN 5eUW U5U-5UN a-WBa SH12 a Hpa aN5W
NUg aVaBN1BH HW -112 UN , SH 4 -N N5B 5a
U 1-35W 5BU 5- 2a SH5ea BHa35 Wa W35UN HX5ea B X5
STR eUW WX5eaBI a5 UaI UN W35UN HX5eU MN 2STR
g U5e -I HI 5UNHX , U 1-35W Ba2 5aI SH-IpaBa 12 a
-Hpa aN5 4 -N N5B 5aW H 2 a 2aW5e-NWUNX3-N5
BaI 3aI 5W2WUNX3-N5

TN-II 5UN 5ea Wa3UX3 3e-N aWH5ea STR 2W5aI UN5ea 5- 2a HN
1-/a -WI-BHX BaWHNW SH3H aN5 4 WH 2 H U
5ea BpUWHNSH1-/a 2NaW -N 5ea BpUWHNSH1-/a
MN UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

20aW

I HN2 WJN ea 1HfaN5U2U 1-35HX5ea BHa35HN1HfaN5U2
1aBe2HB 5a 3HN5 UN5UJNHX a2WUWUNX3-N5-N N-pHU- 2a

,
41-5U2a 5aN5HX S 3HN5 UN5UJNHX1BN5 NaB-22
BHa35WaN-BJMW2aW5e-N5e-5 NaB H BHa353HN UJNW g eaN
3H 1-BaI 5H H BHa353HN UJNW5ea N aBHx a2W3HN5 UN5aI
S NaB BHa3543aN-BJH a -2W5ea N aBHx a2W5e-5-pHU
3HN5 UN5UJN MB BHa3543aN-BJW -N 5ea N aBHx a2W
3HN5 UN5aI a 3aal W5ea N aBHx a2W5e-5 H 2 -pHU 3HN5 UN5UJN

- HfaN5U2T 1-35 ea BHa353H 2 BaW25UN3HN5 UN5UJNHX
a2W S ea 1HfaN5U2U 1-35W5HX5ea BHa35HN S
3HN5 UN5UJNHX a2WUW U5 W5I UN5ea B XSTR -51-/a
-N UN5ea MN2STR -51-/aW 5eH /e

UJ-5UJN a-WBaW ea BHa35 U2UN3H1HB 5a UJ-5UJN
a-WBaW , -N , eUe U2
aNWBa 5e-5 Nug aW5aBN U2IUBa35 BHa35 -5aBWBa-IUN 5H
2U U-IpaBw 12 a Hpa aN5W5H5ea a 5aN5Xa-WJ2a /UpaN
a U5UW UN3 VB 35 Ba -N 3HNW5aN5 U5e aa5UW H5eaB -WJ
-N/a aN5H a35UpaW WJ -p-U 2a I-5 UN3HN NB5UJN U5e
5ea UN5a/B 5aI WBX3a -N /BH N -5aB H a2W Nug aW5aBN U2
UaN5UX /BH N -5aB5aBN WUN32 IUN 12 a Hpa aN5-N
UW2 5a 3e-N aW 55BU 5- 2a 5HU 12a aN5-5UJNHX5ea BHa35 ea
BHa35 U2-2WUN3H1HB 5a , -W aW5BUaI UN5ea MN2
STR -51-/a eUe Ba UBaW Nug aW5aBN 5H - a -N
-2aBN 5Upa -5aBW112 -p-U 2a 5H1-BaW Xa35aI
3HN5 UN5aI a2W5H5ea a 5aN5-N XB5ea I B 5UJN5e-55ea
3HN5 UN5UJNW3- W5I BHa35HlaB 5UJNWHB1BpUa
5a-5 aN5XB-Xa35aI a2W-5 Nug aW5aBN WU5Ba5UJN ea
-2aBN 5Upa W112 HB5a-5 aN5XB-Xa35aI a2W U2 a -Ia
-p-U 2a XB-25U aW eaN1a5UNaN5 -5aB -25 W5N-B W-Ba
a 3aal aI -W BaW25HX5ea BHa35

3 MNUV W , WU5 W5I UNW35UJN HX5ea B XSTR
Ba2 5pa2 2-B a -Ba-WHX1aBe2HB 5a 3HN5aN5B 5UJNW Ba 1BaW5UN
/BH N -5aBUN5ea 4 , UN32 IUN 5ea RaI 2-N W B XHN-N
H5HN 2 aW eaBa -Ba a5 aaN -N Xa aB-3BaW
3HN5 UN5aI I a 5HU 12a aN5-5UJNHX5ea BHa353H 1-BaI 5H H
BHa35 eUBaW25W a3- W5ea S 12 a H N -B I UWI-5aW
H5 U 2 I a 5HUNBa-WI -5UXU2Ba3e-B a -55ea WBa-IUN
-WJW 1/B I UaN5HX5ea H5HN 2 a -N UN3Ba-WI 1 IUN
XH 5ea BaWBa HNa eaBaXB aNaX3U2U 1-35WB3 B NaB
-22 BHa35WaN-BJW U5BaNBaWUN5ea XH51BN5 -Ba- U5e
U 12a aN5-5UJNHX5ea BHa353H 1-BaI 5H H BHa353HN UJNW

MNUV W STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UJNW
-Be

p-B HN- a-B a-B -WW a SH5ea W-5U2-N 5a 1HB 2
p-BU U5 HX S 12 a H NI-BaW NaB BHa353HN U5UNW
aNax3U2U 1-35W H 2 -2WHB3 BU5aB U5aN52 -N 2B-2
ea Na5N aBHx a2W3HN5 UN 5aI Ue S I a SH BHa35
U 12a aN5-5UNp-BaW a5 aaN -N IalaNUV HN BHa35
WaN-BH , /-UN 5ea U 12a aN5-5UNHX5ea U5U-5UN a-WBaW
- N5a2U UN 5a 3HN5 UN-5UNHXUN pU -2 a2W , 2W 5ea
S 3HN5aNB 5UN12 a H NI-BaW - 3HN5UN a SHa 5aN
a HN H BHa353HN U5UN H NI-BaW-N 5eaBa -IpaB2
U 1-35 a2W , N Ba -UNU U 1-35W U2 a WUNX3-N5-N
N-pHU- 2a

ea UN pU -2BaWHNW SH- 3H aN5 5ea a1-B5 aN5HX H U
4 W-NBaW HNB2 4 HN1-/a HX5ea MN-2STR -W
UN5HNW5aN5 Ue 5ea MN-2STR W ea -53 BaWHNW eUe
HX5aI - BH-IaBI U5 WUNHX5eaW aXa35W RaWHNW SH
3H aN5 4 -W5eaBaXBa UNaBBB ea XB5X21-B/B 1e
HX5e-5BaWHNW WH 2 Ba-I 3e-N aWUN5BU a5eBH /e NaBUNa
XB

4aa ea -53 RaWHNW W35UN U5U-5UN a-WBa
, U2 a-112aI SH-pHU -N 2U U-IpaB2 12 a
Hpa aN5W M5eaB -Wl HN3H aN5W3aIpaI I BN BpId
HX5ea B XSTR NUg aW5aBNe-pa Iapa2HlaI -II U5UN-2
U5U-5UN a-WBaW aWUNaI SH-pHU WUNX3-N5U 1-35W2-5aI
SH-IpaB2 12 a Hpa aN5 Wa a2H H apaB UN-II U5UN SH
-112 UN 5eUW U5U-5UN a-WBa SH12 a Hpa aN5W
NUg aW5aBN1BH HW -112 UN , SH 4 -N N5B 5a
U 1-35W-5BU 5- 2a SH5ea BHa35 Wa W35UN HX5ea B X
STR eUWVX5eaBI a5-2aI UN W35UN HX5eUW MN-2STR
g Ue -IHl 5UNHX , U 1-35W2-5aI SH-IpaB2 12 a
-Hpa aN5 4 -N N5B 5aW H 2 a 2aW5e-NWUNX3-N5
BaI 3aI 5W2WUNX3-N5

TN-II U5UN 5ea Wa3U3 3e-N aW5H5ea STR 2W5aI UN5ea 5- 2a HN
1-/a -Wl-BHX BaWHNW SH3H aN5 4 WH 2 H U
5ea BpUWUNSH1-/a 2NaW -N 5ea BpUWUNSH1-/a
2NaW

I HN2 WUN ea IHaNU2U 1-35HX5ea BHa35HN IHaNU2 S
3HN5 UN-5UNHX a2WUWUNX3-N5-N N-pHU- 2a

, 41-5U2a 5aN5HX S 3HN5 UN-5UNXH5I BN5 NaB-2
BHa35WaN-BHWU2aW5e-N5e-5 NaB H BHa353HN U5UNW eUe
BaW2WUN- aNaX3U2U 1-35 g eaN3H 1-BaI SH5ea H BHa35WaN-BH

MN UN WE STR XB4-N5 , N R(paBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

5ea N aBHX a2W3HN5 UN 5aI S NaB BHa3543aNBHJW -N
UW2aW5e-N5ea N aBHX a2W5e-5-pHU 3HN5 UN 5UIN MB BHa35
43aNBHJ 5ea N aBHX a2W3HN5 UN 5aI a -2W5ea N aBHX a2W
5e-5 H 2 -pHU 3HN5 UN 5UIN MB BHa3543aNBHJ 5ea N aBHX
a2W3HN5 UN 5aI a 3aal W5ea N aBHX a2W5e-5 H 2 -pHU
3HN5 UN 5UIN

- H5aN5U2T 1-35 ea BHa353H 2 B2W5UN3HN5 UN 5UINHX
a2W S ea 1H5aN5U2U 1-35W5HX5ea BHa35HN S
3HN5 UN 5UINHX a2WUW W5 W5I UN 5ea B XSTR -51-/aW
-N -N UN 5ea MN 2STR -51-/aW 5eBH /e

U5U-5UIN a-WB2W ea BHa35 U2UN3HBI HB 5a U5U-5UIN
a-WB2W , -N , , eUe U2
aNWB2 5e-5 NUG aW5aBN U2IUB35 BHa35 -5aBW2a-IUN 5H
2U U5-IpaB2 12 a Hpa aN5W5H5ea a 5aN5Xa-W2a /p5aN
a U5UW UN3B V5B 35 B2 -N 3HNW5a5N5 U5e aa5UN H5eaB -W5
-N/a aN5H a35p5aW W5W -p-U2 2a I-5 UN3HN N5UIN U5e
5ea UN5a/ B 5aI W5X3a -N /BH N -5aB H2a2W NUG aW5aBN U2
UaN5X /BH N -5aB5aBN WUN32 IUN 12 a Hpa aN5-N
UW2 5a 3e-N aW55BU 5 2a 5HU 12a aN5 5UINHX5ea BHa35 ea
BHa35 U2-2WUN3HBI HB 5a , -W aW5UaI UN 5ea MN 2
STR -51-/a eUe B2 U2aW NUG aW5aBN 5H - a -N
-2aBN 5p5a -5aBW112 -p-U2 2a 5H1-B2aW X535aI
3HN5 UN 5aI a2W5H5ea a 5aN5-N X5B5ea I B 5UIN 5e-55ea
3HN5 UN 5UINUW3- W5I BHa35 H2aB 5UINW5HBI BpUa
5a-5 aN5XB- X535aI a2W-5 NUG aW5aBN W U5U5UIN ea
-2aBN 5p5a W112 H5B2-5 aN5XB- X535aI a2W U2 a -Ia
-p-U2 2a XB-25U aW ea N1aBUN5a5N5 -5aB -25 W5N -B W B2
a 3aal aI -W B2W5HX5ea BHa35

3 MN UN W , W U5 W5I UN4a35UIN HX5ea B XSTR
B2 5p5a2 2-B a -B2-WHX S 3HN5aNB 5UINW-B2 I B2W5UN
/BH N -5aBUN 5ea 4 , UN32 IUN 5ea W5H a -B 12 a
ea -paB/a a 5aN5HX5ea 12 a W5H5I B5N5UW a5 aaN -N
-3B2aW2W NaB H BHa353HN U5UINW5e-N NaB H BHa35
3HN U5UINW U5aB2aWUN 5ea X5H5I B5N5-B2 U5e U 12a aN5 5UIN
HX5ea BHa353H 1-B2I 5H H BHa353HN U5UINWp-B HN- a-B
a-B -W5W a 5H5ea W-5U2-N 5a 1HB 2p-BJ U5 HX S
12 a H N -B2aW NaB BHa353HN U5UINW aNaX3U2U 1-35W
H 2 UN5aB U5a5N2 -N 2B-22 HB3 B H apaB W5B2a 5ea S
3HN5aNB 5UIN12 a H N -B2aW - 3HN5UN a 5Ha 5aN a HN
H BHa353HN U5UIN H N -B2aW-N 5eaB2 U 1-35 a2WU 1-35W
H 2 a WUNX3-N5-N N-pHU- 2a apaN X52H UN 5ea
U 12a aN5 5UINHX5ea U5U-5UIN a-WB2W , N B2 -UNUN
U 1-35W U2 a WUNX3-N5-N N-pHU- 2a

MN UN W5STR XB4-N5 , N R5p5aBg -5aBRUe5, 1123-5UINW
-B2e

Tg S4 SR S T T -/a

-5 Ia1U3aI UN ea -53 M/ Ba WH We-5apaN
 Ue U 12a aN5-5UNHX , 5eaBa U23HN5UN aSH a
 WUNX3-N5aXa35WHXea BHa35HN 4 3HNBaNSB 5UNW ea
 UN pU -2BaWHNW SH- 3H aN5 5ea a1-B aN5HX H U
 4 W-NBaW HNSB2 4 HN1-/a HX5ea MN-2STR -W
 UN3HNW5a5 Ue 5ea MN-2STR W ea -53 BaWHNW eUe
 HX5aBaI - BHIaBI UW WUNHX5eaWaXa35W RaWHNW SH
 3H aN5 4 -W5eaBaXaBa UNaBBB ea XBBX21-B/B1e
 HX5e-5BaWHNW WH 2 Ba-I 3e-N aWUN5BUa5eBH /e NaBUNa
 XB

4aa ea -53 RaWHNW W35UN U5U-5UN a-WBa
 , U2 a -112aI SH-pHU -N 2U U-IpaBa 12 a
 Hpa aNSW M5eaB -WaI HN3H aNSWB3aUaI I BW Bapla
 HX5ea B XSTR Nug aWaBNe-paIapa2HlaI -II U5UN-2
 U5U-5UN a-WBaWaWNaI SH-pHU WUNX3-N5U 1-35Wa2-5aI
 SH-IpaBa 12 a Hpa aN5 Wa a2H H apaB UN-II U5UNSH
 -112 UN 5eUW U5U-5UN a-WBa SH12 a Hpa aNSW
 Nug aWaBN1BH1HW -112 UN , SH 4 -N NSB 5a
 U 1-35W 5BU 5- 2a SH5ea BHa35 Wa W35UN HX5ea B X
 STR eUWXX 5eaBI a5-2aI UNW35UN HX5eUWMN-2STR
 g Ue -IHI 5UNHX , U 1-35Wa2-5aI SH-IpaBa 12 a
 Hpa aN5 4 -N NSB 5aW H 2 a 2aWe-NWUNX3-N5
 BaI 3aI 5WU2WUNX3-N5

TN-II U5UN 5ea Wa3UX3 3e-N aWH5ea STR 2WaI UN5ea 5- 2a HN
 1-/a -W1-BHX BaWHNW SH3H aN5 4 WH 2 H U
 5ea BapUWHNSH1-/a 2NaW -N 5ea BapUWHNSH1-/a
 2NaW

I HN2 WUN ea 1HfaNSU2U 1-35HX5ea BHa35HN1HfaNSU2 S
 3HN5 UN-5UNHX a22WUWUNX3-N5-N N-pHU- 2a

H. PUBLIC SERVICES, UTILITIES AND TRANSPORTATION

BHa35 HNSB 35UN

- 52a Ba HNSB 35UN, Ba-
 4 HNSB 35UN H 2 2U U5I Ua35-33aW5H 25U2a eH aW-2HN 5ea
 -35 W -W5W Ua2Na RH 5a
- HfaNSU2T 1-35 ea BHa353H 2 2U U5I Ua35-33aW5H 25U2a
 eH aW-2HN 5ea -35 W -W5W Ua2Na RH 5a ea 1HfaNSU2
 U 1-35WHX5ea BHa35HN-33aW5HeH aW-2HN 5ea -35 W -W5W

MN UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
 -Be

Tg S4 SR S T T -/a

UJ-5UN a-WB ea BHa35 U2UNBHEHB 5a UJ-5UN
 a-WBW 4 4 4 4 -N
 4 UN4a35UN HX5ea BXSTR eUe U2aNWB
 5e-5 NUg aWBN U2IUB355ea 3HNB35HB5He-pa - -2XaI
 SBXX3 aN UaaB1Ba1-Ba -N U 12a aN5- SBXX3 -N/a aN512-N
 5e-5IaXNaWeH SBXX3 HlaB5UNW U2 a -N/aI -N -UN5-UNaI
 HNBFI - W BN a-3e 1e-W HX3HNMB 35UN UNB2 IUW -N
 Ia5H BWUN/a 2-Na 32HWBWHB 5U5 Ba2B-5UN HB ea
 SBXX3 -N/a aN512-N U2Wa3UX Na3aWB 2Na 32HWB W
 Ia5H BW-N UN/a Ue5UW X//aBW-N HeaBSBXX3 3HNBH2
 a-WBWNaaI aI 5H-pHU -33UaN5W-N 1BpUa -33aW5HBW aN5W
 -N a aBaN3 BaWHNW paeU2aW HUN 3HNMB 35UN ea SBXX3
 -N/a aN512-N U2 a UNBHEHB 5aI Ue 5ea X2H UN U, 22
 3HNMB 35UN3HN35HBW U21BpUa aa 2 1I-5aWB/-B UN
 3HNMB 35UNWeaI 2aW-N BFI 32HWBWH2B-21H2Ja -N XBa
 BWU35UN W, 223HNMB 35UN3HN35HBW U2NHX -22
 BaWaN5WUN5ea 3HNMB 35UN-Ba- - UNU HX aa aXB
 a/UNUN 3HNMB 35UN UU, 223HNMB 35UN3HN35HBW U2
 3HNB UN 5a 3HNMB 35UN-35pUaW Ue 2B-2a aBaN3 WpUaW
 5ea 4 H524aBpUa WeH2 W-N NSBNWHLaB5BW
 Ia2paB WpUaW-N 2B-2BaXW 3H 1-NaW5HaNWB 3HNUN U
 HX5ea WpUaW p, 223HNMB 35UN3HN35HBW U21H5
 -BNW W/NW-N 3HNMB 35 -BaBWH1Ba paN51aI aW5UNW5H
 UN-IpaBaN52 aNaBN 3HNMB 35UN-Ba-WBX2UN UNSHIaN
 5aN5eaW HNB35HBW U2-2WaNWB 5e-5 BHa353HNMB 35UN
 -Ba-We-pa aaN1BHLaB W3 BaI aXB 2a-pUN 5ea HB W5a -5
 5ea aN HX5ea I- a-WBW - UNB2 Ia 3HpaBN 5aN5eaW
 -N HBUNW 2UN 5a 1HBB XaN UN -N W5a5 Ue5W

3 MN UN W ea -35 W -WUNW Ua20Na H 2I a UN5-2aI UN UNaN
 , paN a g aW4 U, paN a aI-B, paN a g aW -W-2J
 45Ba5 -N 41B3a , paN a , 2HX5eaW BFIW-Ba 5 H2-NaW Ue
 HNa SBpa22Na UNa-3e IUa35UN BN 3HNMB 35UN U H 2I N5
 a 1HWU2a 5H -UN5-UN- SBpa22Na HN5eaW BFI - WWH5eaW
 W5a5W H 2I e-pa 5H a 32HWI H2U U5IUB 15UNSHBFI - W
 5ea -35 W -WUNW Ua20Na H 2I a U5UN5 H 2B W/ aN5W
 S-3e W/ aN5 H 2I a XNUW aI -N HlaNaI 5H5BXX3 aXB 5ea
 Na 55 H 2B W/ aN5HX3HNMB 35UN a/UNW 15UNW53U-5aI
 5e-5a-3e 5 H 2B W/ aN5 H 2I a 32HWI XB 1 5H H5eW
 53HNMB 35UNUNX5H5HX- /pNaNeH a HB1BHLaB H 2I N5
 2W5 HB 5e-N I- W eaBa -Ba 25U2a eH aW-2HN g aW
 4 U, paN a aI-B, paN a g aW -W-2J -N 41B3a
 , paN a 5e-53-NH2 a -33aW5I XB BFI - W5e-5 H 2I a

32HMI I BN 3HNSB 3SUN MBeH aW Ue I Bpa - W3HNa35UN
 SH5ea - X35aI BH I - W- 5a 1HBB BU/a H 2 a 12 3aI
 - 3BHW5ea 1Ua2Na 5aNB e -N 5eaW BAWaBaW H 2 a -2H aI
 W HX5ea 3HNSB 3SUNa U aN52-Na ea 2HWHXI Ua35
 paeU 2B-33aWW BAWaNSW1 23 WpUa 1BpUaBW-N
 a aB aN3 BAWHNa paeU2aW-N 5ea e- -B SH1aIaVBNW H 2
 a - WNU3-N5U 1-35 , 2eH / e U 12a aN5 SUNHX5ea
 U5U-5UN a-WBaw H 2 BAI 3a U 1-35W2-5aI SH-33aVWH
 eH aW 2H 5ea -35 W - WNW Ua2Na BH 5a -33aWW
 a aB aN3 BAWHNa paeU2aW-N H5eaB1 23 WpUaW H 2 W2
 a 2U 5aI , N Ba -UNU U 1-35W U2 a WNU3-N5-N
 N-pHU- 2a

I HN2 WUN ea 1HaNU2U 1-35HX5ea BH a35HN-33aVWH
 eH aW 2H 5ea -35 W - WNW Ua2Na RH 5a UWNU3-N5-N
 N-pHU- 2a

VIII. FINDINGS REGARDING ALTERNATIVES

TN-33HB -N3a Ue S , Ua2NaW NUg aVBN Iapa2H1aI - Ba-WN- 2a BN a HX
 -2aBN-5paWXB-N2 WUN5ea B XSTR eUMBBaWUNpHpaI -WawWV 5ea Xa-WU25 HX
 p-BH W5 1aW HX a-WBaw-N ap-2 -5UN 5ea - U5 HX5eHW a-WBawSH aa55ea 1BHa35
 H a35paW ea H SH a HX5eUMBBaW -VHUaNUX 5ea BH a35-N XI B-2aBN-5paW5H5ea
 BH a35 UN2 IUV 5ea H BH a35 W aN-BH eaW -2aBN-5paW-Ba W -BUaI a2H

New Local Water Supplies (Alternative 1)

eUW-2aBN-5pa 5UaWNa 2B-2 -5aBW112aW5e-5e-pa N5 aaN 5UaI UN5ea 1-VI a 5H
 3HN3aBNW/B- B UV -5aB -25 3HNS HBH5eaBUNW5 SUN-23HNSB UN5W eBa 5 1aW HXNa
 2B-2 -5aBW112aW-Ba B3 UV / BH NI -5aBI aW2UN-5UN Ba/UN-2 -5aBa3 32UN -N
 UNBa-VI / BH NI -5aBa 5B3SUNXH 5ea RpaBWA -WN TNBa-VI / BH NI -5aB
 a 5B3SUNXH 5ea 4 , -WN53HNW aBaI -W-N-2aBN-5pa a3- W 5ea 4 , UWX 22
 -I IU-5aI -N 3HNSB2aI 5ea Western I/ aN5 , IISUN-2/ BH NI -5aBa 5B3SUNW H 2
 NaB5ea 5aB W HX5ea Western I/ aN5 Ba Ua -IISUN-2U 1HB5-SUNHX -5aBXH aU5eaB5ea
 4g HB5ea H2BIHRpaB eUe H 2 N5 aa5- -W3/H-2HX5ea BH a35

ea Na 2B-2 -5aBW112aWUaNUaI UN5eUW-2aBN-5pa Ba Ua Na -IISUN-25a-5 aN5-N
 IUVBU SUNX3U5aW e W5ea W HX5ea Na -5aBW112aW UeUN5ea NUg aVBN WpUa
 -Ba- H 2 UNpHpa 3HNSB 3SUN-35pUaW Ue aNpUHN aN5-2U 1-35W 15UW-VW aI 5e-55ea X 22
 - H N5HX -5aB-p-U2 2a NaB5ea BH a35 H 2 a -Ia-p-U2 2a 5eH / e -N HNa HX5ea
 -2aBN-5pa -5aBW112aW

eUW-2aBN-5pa H 2 HN2 -5-UNW a HX5ea BH a35H a35paW-N e-W -N HX5ea W a
 aNpUHN aN5-2U 1-35W W5eHW HX5ea BH a35 Ua35U 1-35WUN5ea aNpUHN aN5 H 2 BaW5
 XH 5ea 3HNSB 3SUNHXNa B3 UV I aW2UN-5UN -Va -5aBa3 32UN HB/ BH NI -5aB
 a 5B3SUN-NI 5a-5 aN5X3U5aW-N 5ea 1Ua2NaW-N 1 1 W-SUNWNa3aWWB SH3HNpa 5ea
 Na 2 1BH 3aI -5aB 4H a IUB35U 1-35W H 2 -2MIBaW5XH 5ea H1aB SUN-NI W HX

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
 -Be

5eaW Na 2B-2 -5aBW112aWW3e -W Ia/BI-5UNHXWBX3a -5aB -25 UN5ea 4, R -
/Ba-5aBaI 35UNUN4, R XH W- /Ba-5aBI a3Ba-W UNBa/UN2/BI NI -5aB2apa2W-NI /Ba-5aB
U 1-35WH-UB -25 NHUW -aV5ea53 BaWI BaW 525aW-NI 5BNWH5-5UN -NI /Ba-5aBU 1-35W
Ba2 5aI 5He- -B H W -5aBU2W -B3 2-BE UN2/e5HXBa3aN53HN3aBNWBa2-5UN 5H5ea -25 HX
U 1H5aI -5aBUN5ea 4-N5 , N RpaB -5aBWal 5eaW U 1-35WUN U-5a 5e-55eUW 2aBN 5pa UW
N5aNPUN aN5-2 W1aBUBSH5ea BHa35

Enhanced Conservation (Alternative 2)

ea U 12a aN5-5UNHX-NaN5-NBaI 3HNWB-5UN1BH B N aB5eUW 2aBN 5pa H 2 1BpUa -
W U 2-B- H N5HX -5aB5H5ea - U -NN -2-paB/a 1BpUaI 5ea BHa35-NI H 2 aa5
5ea BHa35H a35pa HXBaI 3UN NUG aV5aBNW a1aN aN3a HNU 1H5aI -5aB eUWaN5-NBaI
-5aB3HNWB-5UN H 2 a UN-115UNSH5ea Ia -NI BaI 35UNUN32 IaI UN5ea -5aB
Ia -NI 1BHa35UNW-NI H5eaB-N3U-5aI -5aBI a -NI -N/a aN5-35UNW

eUW 2aBN 5pa H 2 N5-5-UN HW5HX5ea BHa35H a35paW a3- W U5 H 2 N5 aa55ea
H a35pa HXI a2paBN -115UN-2eUe -25 -5aBUN5a-I HXU 1H5aI W112aW-NI H 2 N5
U 1Bpa HlaB 5UN-2Xa U U5 a3- W U5IHaWN5a 1-N 5ea N aBHx -5aBW112 WI BaW5B
a 1-N 5ea - U5 5H Hpa -5aB5HI UXBaN52B-5UNW U5UN5ea NUG aV5aBN4aP3a -Ba-W

TN-115UN 5eUW 2aBN 5pa H 2 e-pa - N aBHx1H5aN5U2 WUNX3-N5U 1-35WHN5ea
aNPUN aN5H5eaB5e-N5eHW -WBUSaI U5 5ea BHa35 41a3UX3-2 5eUW 2aBN 5pa H 2
e-pa -N-IpaBW U 1-35HNWBX3a -5aB -25 I a 5H5ea BaI 3aI -25 HXaX2 aN5XH WXH
-W5a -5aB5Ba-5 aN5X3U5aW-NI -5aN-N5UBa-WI W253HN3aN5B 5UNW eUW 2aBN 5pa
H 2 W U 2-B e-pa -IpaBW U 1-35WHN/BI NI -5aB -25 -NI U2H U-2BaWI BaWXH 5ea
I U5e-B a -NI 1aBH2-5UNHXW3e 2H aB -25 -5aB eUW 2aBN 5pa H 2 BaI 3a U 1-35W
XH 5ea BHa35-WBUSaI U5 3HN5B 35UN -B3 2-BE UN2/e5HXBa3aN53HN3aBNW WBUSaI
U5 5ea Ba3e-B a HXU 1H5aI -5aB-NI 1H5aN5U2U 1-35WHN -5aB -N/a aN5UN5ea 4-N5
, N RpaB -5aBWal 5eaW aX35W-Ba WUNX3-N5

TNW -B 5eUW 2aBN 5pa H 2 N5 aa5 HW5HX5ea H a35paWHX5ea BHa35-NI H 2 e-pa
- N aBHxWUNX3-N5-IpaBW U 1-35WHN5-WBUSaI U5 5ea BHa35 eUa HN2 BaI 3UN
3HN5B 35UNU 1-35WXH 5ea BHa35 ea B X5STR Ia5aB UNaI 5e-55eUW 2aBN 5pa -W
aNPUN aN5-2 W1aBUBSH5ea BHa35 UN2/e5HX5ea Ba3aN53HN3aBNWBa/-B UN 5ea Ba3e-B a HX
U 1H5aI -5aBUN5ea 4-N5 , N RpaB -5aBWal 5ea U 1-35WHX5eUW 2aBN 5pa -Ba NH H5a
3H 1-B 2a 5H5ea U 1-35WHX5ea BHa35 HNa5ea2aW NUG aV5aBNXNI 5e-55eUW 2aBN 5pa
Ba -UNWaN5NPUN aN5-2 W1aBUBSH5ea BHa35

New Imported Water Supply (Alternative 3)

eUW 2aBN 5pa Ba UaW5ea Iapa2HI aN5HXNa U 1H5aI -5aBWI BaW5B5ea -3 U5UNHX
a U5UN -5aBWI BaW5B2H aI 5ea 5BNW5BHx5e-5 -5aBXB W UN5ea NUG aV5aBNWp3a
-Ba-W5B-3H UN-5UNHX H5e HHI 5UNWXBNa U 1H5aI -5aBWI BaW-Ba -115UN-2
4g -5aB-NI W- -5aBI aW2UN-5UN

TX5eUW 2aBN 5pa aBa U 12a aNaI 5eBI /e 5ea -3 U5UNHX-115UN-24g W112aW5ea
-2aBN 5pa H 2 N5BaI 3a 5ea IalaN aN3a HX NUG aV5aBNHNU 1H5aI -5aB-NI H 2 N5

MN UN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-5UNW
-Be

Tg S4 SR S T T -/a

Ia2paBN 2B-2 eUe -25 -5aBUN5a-I HXU 1H5aI W112aW TN5eaW - W5ea-2aBN 5pa
H 2 NH5 aa55 HHX5ea 5eBa H a35paWHX5ea BHa35 ea U 1H5-5UNHX-II 5UN-24g
-5aB H 2 e-pa U 1-35WN-NH5eaB45-5a g -5aB HN5B 35BWWaPa -Ba- 5UNH5 1HWU2a -5
5eUWU a 5HUaNX 5eHW aXa35W 5eaBU 1-35W-WBU5aI 5e W3e-3 5UN-Ba NH5Ua2
5H a WNX3-N5 /paN5e-55ea -5aBUN a5UNe-W2a-I aaNI paBaI XH 5ea a5- -N NH
Na 3HNpa -N5a HBI 5BU 5UNX3U5aW H 2 a Ba UI

TX5eW-2aBN-5pa aBa U 12a aN5aI 5eBI /e 5ea 3HN5B 35UNHX- W- -5aBI aW2UN-5UN12-N5
Nug a5aBN H 2 HN5Ua2 e-pa 5HNa/H5U5a -/Ba aN5W 5e H5eaB-/aNBaW eaBa
U 1H5aI 4g -5aB H 2 a a 3e-N aI UN2a HX -5aBI aBpaI IUBa352 XH 5ea IaW2UN-5UN
, /-UN 5ea U 1H5-5UNHXW3e -5aB H 2 NH5BaI 3a Nug a5aBN W aIaN aN5a HNU 1H5aI
-5aBW112aWHBI a2paB2B-2 eUe -25 -5aBUN5a-I HXU 1H5aI W112aW ea U 1-35WHX
5eW-2aBN-5pa HN5ea aNpUBN aN5 H 2 HB3 B-I -3aN55H5ea Na W- -5aBI aW2UN-5UN
X3U5 UN2 I UN 1H5aN5U2 /Ba-5aBU 1-35W5e-N-WBU5aI 5e 5ea BHa355HB3Ba-5UN-2
BaWI BaW aIaN UN HN5ea 2B-5UNHX5ea IaW2UN-5UN12-N5 /Ba-5aB-UB -25 U 1-35W BN
HLaB 5UNW5e-N5eHW -WBU5aI 5e 5ea BHa35 1H5aN5U2 /Ba-5aBU 1-35WH-a5ea53
BaWI BaW XH IaW2UN-5UN12-N5 3HN5B 35UN-35pU5aW5e-N5eHW -WBU5aI 5e 5ea BHa35
-N /Ba-5aBU 1-35WH5e- -B H W -5aBU2W5e-N5eHW BaW2UN XH 5ea BHa35

MB5eaW Ba-WNW5eW-2aBN-5pa UNH5aNpUBN aN5-22 W1aBHB5H5ea BHa35

No Project Alternative

ea H BHa35, 2aBN-5pa -WW aW5e-5NH3H 1HN5NW1e W3-2HB1BH B -WI HX5ea
BHa35 H 2 a U 12a aN5aI -N 5e-5X5 Ba -5aBNaI W H 2 HB3 B-WBHa35aI ea H
BHa35, 2aBN-5pa H 2 HB3 BUX Nug a5aBN3eHW N55H/HXB -B 5e 5ea BHa35HBUX
5ea 4g R Ia3UaI N55HUW a-N-11BH1B5pa -5aBBUe51aB 55H Nug a5aBN , W
Ba UI S , 5ea 1 BH5HXI aXUN -N ap-2 -5UN 5eW-2aBN-5pa W5H1BpUa Ia3UN
- aBW 5e UNXB -5UNHN e-55ea aNpUBN aN5-23HN 5UNW H 2 a UN5ea - WNBa HX5ea
1BH1HWI -35UN

NaB5ea H BHa35-2aBN-5pa NHWNX3-N5IUBa35U 1-35W H 2 HB3 B a3- W -5aB
I paBUNW-N Ba-WW H 2 a -Ia UN-33HB-NBa 5e eUWHB3-N 3 BaN51B353aW-N
a3- WNHNa 3HN5B 35UN H 2 a Ba UI NaB5eW-2aBN-5pa -XaB- H 5
a UNW -5aBW112 WI BaW H 2 NH2N aB a-Ia -5a 5H aa5Ia -N TN5ea - WNBa HX
Na WI BaWHX -5aB 5ea B5a HX1HI 2-5UN/BH 5e 3H 2 IU UNW I a 5H5ea 3HN5B UNaI -5aB
W112 TX5e-5IHaWN5HB3 B Nug a5aBN H 2 X22 5Ua a UNW 4g W112aW-5-N
a-BaBI-5a 5e-N NaB5ea BHa35

, SR , T S4 RS T 4 4T SRS

4H a -2aBN-5paW aBa UaN5UaI -N Ba HpaI XH X5eaB3HNW aB 5UNXB- p-Ba5 HX
Ba-WNW5e-5BaW2aI UN5ea-2aBN-5paW aUN Iaa aI UN5a-WU2a UN2 I UN UN55 5UN-2 -BaBW
UN U5 5H aa51BHa35/H-2WaNpUBN aN5-23HNW aB 5UNWHBWI a 3H UN-5UN5eaBaHX ea
I U5 WUN5e-5X2H WI BpUaW BaXHpapUa HX5eaW 1BpUH W 3HNW aBaI -2aBN-5paW-N
3H 1HN5NW-N Ia HN5B 5aW5ea Ua B N a HX-2aBN-5paW3HNW aBaI Nug a5aBN UN5ea

Iapa2Hl aN5HX5ea BHa35 5IHWNH5IaWBUa apaB 3H UN-5UHNHX3H 1HNAN5W BapUH W
ap-2 -5aI NUg aWABN

Imported Water From Other Systems Alternative

ea W HXU 1H5aI -5aBXH -5aBW112 WWA WHeaB5e-N5ea 4g -WUN5U2
3HNW/aBaI , 2aBN-5pa W112 WWA WWH 5ea XaIaB2 aNB2 -2a BHa35 5ea H2BIH
RpaB-NI 5ea HW N a2aW a1-B5 aN5HXg -5aB-N H aB aNWRpaB aBa Ba HpaI XH
XBeaB3HNW/aB5UHN NUg aWABN a3- W HX5eHW WWA WUN- U5 SH aa55ea H a35paW
HXBaI 3UN IalaNaNa HNU 1H5aI -5aB U 1BpUW HpaB2 -5aBW112 BaU U5 HB
Ia2paBN eUeaB -25 2B-2 -5aBUNW-I HXU 1H5aI W112aW TNBa-WW U 1H5XH 5eaW
WI BaW -W 2MIaa aI UNa-W2a a3- W HXWpaB2UNW5 5UHN-2 -BaBW NaB5eW
-2aBN-5pa WI a HX5ea BHa35W Ua35U 1-35W25UN XH 3HNWB 35UHN-N HlaB 5UHN-2
-35pUaW H 2 W2HB3 B

Diversion of Unappropriated SAR Water and Use of Existing Facilities Alternative

NUg aWABN ap-2 -5aI 5ea 1H5aNU2XB-35pa2 WW 5ea a U5UN /BH NI -5aBB3e-Ba
X3U5aWH NaI -NI 3HNWB2aI 5ea 4-N aBN-B UNH -2a g -5aB HNWp-5UHN U5B35
HNWp-5UHN U5B35 -NI 5ea NHB -22 IB HpaBaI HX5ea 4, R XH 52a g aUB5H4-N
aBN-B UNHTNaBN-5UHN-2, UH H5 eUW-2aBN-5pa -W Ba HpaI XH XBeaB3HNW/aB5UHN
1BU-B2 a3- W HXU5WUN- U5 SH aa5 BHa35H a35paW eUW-2aBN-5pa H 2 NF5UBBa-W
HlaB 5UHN-2Xa U U5 5Ha5eaB3HN N5pa2 W -221H5UHNW HX5ea Ba/ UHN-2/ BH NI -5aB -WN
UN-NaXa35pa -NNaB HBa 3e-N a -5aB 5e NaUe HBN -5aBI U5B35W eaN3HNpa -Nba
3-1-3U5 a U5W-N 2B-2 -5aBW112aWa 3aal 2B-2Ia -NI , 2MI 5ea 2HN 5aB -paB/a
- H N5HX -5aB-p-U 2a SH NUg aWABN 3H 2I a 2aW5e-N5e-5BaW25UN XH 5ea BHa35
MN-2 5eUW-2aBN-5pa H 2 NF5aNe-NBa BaU U5

S TR S , 4 SRT R, SR , T S

MB5ea Ba-WNWUW WAI - Hpa 5ea H BHa35, 2aBN-5pa UW HpaB2 5ea aNpUBN aN5-2
WlaBBB-2aBN-5pa eH apaB U5 aa5WNHNa HX5ea BHa35H a35paW , W a5 aaN5ea BHa35
-NI , 2aBN-5paW -NI , 2aBN-5pa SN-NBaI HNWp-5UHN U5ea aNpUBN aN5-2
WlaBBB-2aBN-5pa

IX. FINDINGS RELATED TO CUMULATIVE IMPACTS

A. 2-5pa T 1-35, N-2 WW

S , Ua2NaW35UHN 1BpUaW5ea X a HB XB-N-2 WWHXU 1-35W WBU5aI 5e
U 12a aN5-5UHNHX- 1BHa35-N U5B 2-5pa U 1-35W , IUW WUHNHX3 2-5pa U 1-35W
UB2 IaW5ea 3H UN-5UHNHXWUNX3-N5-NI 2aW5e-NWUNX3-N5 1BHa35 Ba2-5aI U 1-35W-NI -22
2apa2WHXU 1-35WXB H5eaB1-W 1BaWN5 -NI Ba-WN- 2 XBaWa- 2a X5 Ba 1BHa35W
2-5pa U 1-35WNaI NF5 a IaWBUaI eaBa 5ea BHa35e-WNH1e W3-2U 1-35WNaI 5ea
aNpUBN aN5 HNW5aN5 5e 5eaW Ba Ua aN5W3 2-5pa U 1-35W-Ba IUW WAI UN e-15aBW
-NI HX5ea BXS TR

ea IUW WUNHX3 2 5pa U 1-35WUN4a35UN HX5ea MN-2STR aN5 a HN 5eaW
 Ba UB aN5W 1BHpUWV -11UUN-2UNXB -5UN- H 5H5eaB1BHa35W5e-5e-pa 5a 1H5aNU25H
 -Xa35H5eaB1H5UNW5X5ea 4, R W5a apaN5eH / e 5ea BHa35 H 2 N5e-pa - 1e W3-2
 U 1-35HN5eH5H5eaB1H5UNW3e - W a2H RUpaB5a -BH W

TNW -B 5ea X2H UV 1BHa35WUN3HN N5UN U5 5ea 1BH5W1 BHa35 U2BaW25UN
 3 2 5pa U 1-35W1aB5ea B XSTR WUV WUNUN e-15aB eaW 1BHa35WUN3H UN-5UN
 U5 5ea 1BH5W1 BHa35 3H 2 e-pa 3 2 5pa aXa35WUN5ea W a/aH B 1eU -Ba- eaW
 1BHa35W aBa W2a35aI a3- W 5ea -Ba 3 BaN2 a5eaB-11BHpaI HB NaB3HNW1aB 5UNXB
 -11BHp-2 -N 5ea -2Ba1BaW512-NW1BH B W-N -35UNW1aB-UNUV 5H -5aBB/e5W -5aB
 BaW BaW5X5ea 4, R -N -5aB5W1 BaW5X5ea NUg a5aBNWpUaW-Ba-W

- BH5W1 -N -N/a aN5-N - U-5 HN5p-5UN 2-NXB5ea 11aB4-N5
 , N RUpaBg -W g -W 2-N
- 4-N aBN-B UNH -2a N3U-2g -5aB U5B35Ra/ UN-2g -5aBM3U5aW -5aB
 2-N -5aB 2-N
- S-W BNBe S 5aWUN S BHa35 e-W T
- ea a5BH5U5 Ng -5aB U5B35HX4H 5eaBN -2XHNJ TN2-N MaI aB TN2-N
 MaI aB
- 4apaN - W - HBH U5 BH N -5aB HN5p-5UN-N - U-5RaW5B 5UN
 BHa35 RaW5B 5UN BHa35
- U2H U-2 1UNUNXB5ea 1aB 5UNHX4apaN - W -
- 4-N aBN-B UNH -2a g -5aB HN5p-5UN U5B35g -5aBRUe5, 1123-5UN
 HN5p-5UN U5B35, 1123-5UN
- U5 HXRUpaB5a g -5aBRUe5, 1123-5UN RUpaB5a , 1123-5UN
- eUNH -WNg -5aB -5aBg -5aBRUe5, 1123-5UN eUNH, 1123-5UN
- BN a HN5 g -5aB U5B35g -5aBRUe5, 1123-5UN g , 1123-5UN
- RT M3U5 Ra3 32aI g -5aB W BHa35 RT g -5aBRa3 32W
- U5 a -5aBN BH B X5B5ea NaB U2 -WN, Ba- HX U5B3 Ue
 BH N -5aB U5 a -5aBN
- RUpaB5a HB N MaI aB
- H5e - a , Ba- -N 4H 5e - a , Ba- BHa35 H5e 4H 5e - a

ea BHa35 UN3H UN-5UN U5 5ea Ba2-5aI 1BHa35W5aI - Hpa UW-N5U-5aI 5H-e-pa
 3 2 5pa2 WUNX3-N5U 1-35WUN5ea X2H UV BaW Ba -Ba-W

- 4 BX3a g -5aB 1BH5 -N g -5aB -25
- BH N -5aB 1BH5 -N g -5aB -25
- U2H U-2RaW BaW
- aH5 4H2W-N UNaB2RaW BaW
- -N W-N 2-NNW
- , /B3 25 B2RaW BaW
- , UB -25
- 25 B2RaW BaW
- HW

MN UN WE STR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
 -Be

Tg S4 SR S T T -/ a

- , aW~~ea~~3W
- - BH W -~~5a~~2W-N BH N -~~5a~~ H~~5~~ UN-~~5U~~N
- 23 4a~~p~~3aW ~~5U~~5aW-N B~~NW~~H~~5~~-~~5U~~N
- BH ~~5e~~ TN 3UN T 1-35W

- 2a UN~~5e~~ B~~X~~S~~T~~R -~~55~~3eal ea~~B~~5H-W ~~55~~3e aN~~5~~ Ia H~~N~~5~~B~~5aW~~5e~~ B~~2~~5U~~N~~W~~U~~ HX
 5e B~~2~~5a~~l~~ 1B~~H~~a~~3~~5W~~5e~~a~~U~~Ba~~N~~p~~U~~H~~N~~ aN~~5~~2a~~X~~35W~~5e~~-5 - UN~~5a~~B~~3~~5 U~~e~~ U 1-35W~~H~~X~~5e~~ B~~H~~a~~3~~5 -N
 5e /a~~H~~B~~l~~e~~U~~-~~B~~-W ea~~B~~ U 1-35W~~B~~H 2 HB3 B

, Wa~~W~~B~~U~~a~~l~~ UN e-15aB -N HX~~5e~~ B~~X~~S~~T~~R 5e B~~H~~a~~3~~5-N B~~2~~5a~~l~~ 1B~~H~~a~~3~~5W~~B~~a 1a35a~~l~~ 5H
 e-pa W~~N~~X~~3~~-N~~5~~UN ~~U~~B~~3~~5a~~X~~35W~~B~~2-5a~~l~~ 5H/BH ~~5e~~-N Iapa~~Z~~H~~l~~ aN~~5~~UN~~5e~~ W~~B~~U~~3~~aW~~B~~-W~~l~~aW~~U~~5a
 4-N a~~N~~-B~~U~~NH H~~N~~5 aNa~~B~~2 2-N-N R~~l~~p~~a~~B~~W~~a H~~N~~5 aNa~~B~~2 2-N1H~~3~~U~~l~~aW~~l~~aW~~N~~a~~l~~ 5H
 -pHU -N 2U ~~U~~U 1-35W~~B~~2-5a~~l~~ 5H/BH ~~5e~~

ea B~~X~~S~~T~~R I~~U~~W~~W~~a~~l~~ 3 2-5pa U 1-35W~~H~~X~~5e~~ B~~H~~a~~3~~5-N 1-W~~l~~ B~~W~~N~~5~~-N B~~-~~W~~N~~-2
 X~~B~~a~~W~~a- 2a X5 B~~1~~H~~a~~35W~~2~~H~~N~~ 5e a 4, R -N H~~5e~~aB-11B~~H~~I~~B~~J~~5~~a B~~W~~I~~B~~a -N/a aN~~5~~-B~~-~~W~~T~~N
 1-B~~U~~ 2-B 5e B~~X~~S~~T~~R I~~U~~W~~W~~a~~l~~ 5e a 3 2-5pa U 1-35W~~H~~X~~3~~H~~N~~5~~B~~ 35U~~N~~-35p~~U~~5 -W~~B~~U~~5~~a~~l~~
 U~~e~~ 5e B~~H~~a~~3~~5-N H~~5e~~aB~~3~~H~~N~~5~~B~~ 35U~~N~~-35p~~U~~5aW~~N~~5e B/ U~~N~~ ea MN~~2~~S~~T~~R UN~~B~~W~~H~~N~~W~~ 5H
 B~~a~~ a~~W~~X~~B~~UN~~X~~B -5U~~N~~B~~a~~/ -B~~U~~V 5e 1H~~5~~a~~N~~5~~U~~23 2-5pa a~~X~~35W~~H~~X -5aB
 Iapa~~Z~~H~~l~~ aN~~5~~ -N/a aN~~5~~1B~~H~~a~~3~~5W~~2~~H~~N~~ 5e a 4, R 1B~~p~~U~~a~~l -11U~~U~~N~~2~~UN~~X~~B -5U~~N~~UN~~2~~I~~U~~V 5e a
 1H~~5~~a~~N~~5~~U~~2X~~B~~-11U~~U~~N~~2~~3 2-5pa a~~X~~35W~~H~~XH -N aB~~H~~X~~H~~5e aB1B~~H~~a~~3~~5W~~5e~~-5e-pa B~~3~~a~~N~~5~~2~~
 aaN1B~~H~~I~~H~~W~~I~~ -5aB~~I~~U~~B~~35W~~5e~~BH/e NUW~~N~~5a/B 5a~~l~~ Ra/ U~~N~~2 BH N -5aB -N/a aN~~5~~
 2-N-N g a~~W~~B~~N~~W~~N~~5a/B 5a~~l~~ Ra/ U~~N~~2g -5aB -N/a aN~~5~~ 2-N1B~~B~~a~~W~~W, 2HX~~5e~~H~~W~~
 1B~~H~~a~~3~~5W a~~B~~a~~U~~5e aB U~~U~~N~~2~~Ia~~l~~ UN~~H~~Na HX~~5e~~ 1B~~H~~a~~3~~5W~~B~~a~~p~~U~~H~~W -N2 a~~l~~ UN~~5e~~ B~~X~~S~~T~~R U
 U~~2~~5- a 12-3a -5W3e 2B-5U~~N~~W~~N~~ HB-5W3e 5U aW~~5e~~-55e a UN~~3~~H UN-5U~~N~~ U~~e~~ 5e B~~H~~a~~3~~5
 U~~2~~N~~5~~3B~~-~~5a 3 2-5pa U 1-35W~~N~~5e a~~N~~p~~U~~H~~N~~ aN~~5~~ HB~~U~~U -B~~W~~l~~a~~-B~~U~~N~~5e~~ Iapa~~Z~~H~~l~~ aN~~5~~
 1B~~B~~a~~W~~5e-5-N -N2 W~~W~~H~~X~~1H~~5~~a~~N~~5~~U~~2U 1-35W H 2 a Wa3 2-5pa H~~N~~W aN~~2~~ NH3e-N aW
 UN~~5e~~ B~~X~~S~~T~~R W~~3~~ 2-5pa U 1-35W~~N~~2 W~~W~~ a~~B~~a Na3a~~W~~W~~B~~

X. STATEMENT OF OVERRIDING CONSIDERATIONS

S , B~~a~~ U~~B~~W 1 23 -/a~~N~~ 5H -2N~~5a~~ 5e aNa~~X~~5W~~H~~X- 1B~~H~~I~~H~~W~~I~~ 1B~~H~~a~~3~~5-/-UN~~W~~U~~W~~
 N-pHU- 2a a~~N~~p~~U~~H~~N~~ aN~~5~~2B~~W~~W~~U~~N~~I~~a~~5~~aB UN~~U~~V ea~~5e~~aB~~5~~H-11B~~p~~a 5e a 1B~~H~~a~~3~~5 NU~~g~~ a~~W~~B~~N~~
 1B~~H~~I~~H~~W~~W~~H-11B~~p~~a 5e a B~~H~~a~~3~~5IaW~~U~~5a 3a~~B~~-UN~~W~~N~~X~~3-N~~5~~ N-pHU- 2a -Ipa~~B~~U 1-35W
 Ua~~N~~5U~~l~~ UN~~5e~~ a 4-N~~5~~ , N- R~~l~~p~~a~~B~~g~~ -5aBR~~U~~e5, 1123-5U~~N~~W~~M~~B4 112a aN~~5~~2g -5aB4 112 STR
 ea aN~~5~~U~~B~~ STR UN~~2~~IaW p~~H~~2 aW 5e a B~~X~~S~~T~~R UN~~2~~I~~U~~V -11a~~N~~U~~3~~aW-N 5e a MN~~2~~
 STR e~~U~~5e UN~~2~~IaW~~B~~W~~H~~N~~W~~W~~H~~3H aN~~5~~W~~N~~ -11a~~N~~U~~3~~aW

A. Impacts of the Project

, Wa~~W~~B~~U~~a~~l~~ UN~~W~~35U~~N~~ T- H~~p~~a 5e a B~~H~~a~~3~~5 U~~2~~e-pa 2aW~~5e~~-N W~~N~~X~~3~~-N~~5~~a~~X~~35W~~N~~5e a
 a~~N~~p~~U~~H~~N~~ aN~~5~~UN~~5e~~ X~~2~~H UN B~~W~~I~~B~~a -B~~-~~W4 B~~K~~3a g -5aB 1B~~H~~I~~H~~ -N g -5aB -25
 BH N -5aB 1B~~H~~I~~H~~ -N g -5aB -25 U~~H~~I~~U~~-2Ra~~W~~I~~B~~aW a~~H~~I~~H~~ 4H~~2~~W~~N~~ UN~~B~~2
 Ra~~W~~I~~B~~aW -N W~~-~~N 2-NN~~U~~ , /B3 25 B2Ra~~W~~I~~B~~aW, UB -25 25 B2-N
 -2a~~H~~N~~5~~H~~I~~U-2Ra~~W~~I~~B~~aW HU~~W~~ , aW~~ea~~3W - BH W -~~5a~~B~~U~~2W-N BH N -5aB
 H~~N~~5- UN-5U~~N~~ -N 23 4a~~p~~3aW ~~5U~~5aW-N B~~NW~~H~~5~~-5U~~N~~ ea B~~H~~a~~3~~5 U~~2~~e-pa

MN UN WE STR X~~B~~4-N~~5~~ , N- R~~l~~p~~a~~B~~g~~ -5aBR~~U~~e5, 1123-5U~~N~~W
 -Be

W/NX3-N5-N N-pHU- 2a aX35WN5ea aNpUBN aN5UN5ea XZH UN BaWi Ba -Ba-W4 BX3a
g -5aB IBHY -N g -5aB -25 BH N -5aB IBHY -N g -5aB -25 aHY
4HZW-N UNaB2RaWi BaW, UB -25 25 B2-N -2aHNSHY U-2RaWi BaW HUW
- -BH W -5aB2W-N BH N -5aB HN5 UN5UN 23 4aP3aW 525aW-N
BNWH5-SUN ea BHa35 U2UN 3a/BH 5e U5UN5ea NUG aVaBNWp3a -Ba-W
1BpUUN - HBaBa2 2a -5aBW112 -N Wle-pa UNUB35U 1-35WN5ea XZH UN BaWi Ba
-Ba-W IBHY -N g -5aB -25 UHY U-2RaWi BaW aHY 4HZW-N UNaB2
RaWi BaW -N W-N 2NNUN , /B3 25 B2RaWi BaWRa3Ba-SUN-2RaWi BaW, UB
-25 25 B2-N -2aHNSHY U-2RaWi BaW HUW , aV5a53W - -BH W -5aB2W-N
BH N -5aB HN5 UN5UN -N 23 4aP3aW 525aW-N BNWH5-SUN ea BHa35
U2UN3H UN5UN U5e -21-W 1BaWN5-N Ba-WN- 2 XBaWa- 2a X5 Ba 1Ba35We-pa
3 25pa U 1-35WN5ea aNpUBN aN5UN5ea XZH UN BaWi Ba -Ba-W4 BX3a g -5aB
IBHY -N g -5aB -25 BH N -5aB IBHY -N g -5aB -25 UHY U-2
RaWi BaW aHY 4HZW-N UNaB2RaWi BaW -N W-N 2NNUN , /B3 25 B2
RaWi BaW, UB -25 25 B2RaWi BaW HUW , aV5a53W - -BH W -5aB2W-N
BH N -5aB HN5 UN5UN -N 23 4aP3aW 525aW-N BNWH5-SUN

B. Mitigation Measures

ea UJ-SUN a-WBaWNBHIB5aI UNH5ea STR-N 5ea R Ia HNB5a-3H U5 aN5
NUG aVaBNH-pHU UNU Ua -N 3H 1aNW5a XBaNpUBN aN5-2U 1-35WHX5ea BHa35
UJ-SUN a-WBaWNB2 Ia 5ea XZH UN

4g a3- W-N-aBH U 3HN UJUNW-Ba - 1BH 2a -WBU5aI U5e 3 BaN5
HlaB SUNW-54apaN - W - UJUNW53U-5aI 5e-55ea HlaB SHBWX5ea I- 4-N
aBN-BUNH RpaBWa -N BN a 3HN5 XHI 3HNSB2I U5B35W NH N-W5ea
HB-241HNWBW U2U 12a aN5- 1BY B W3e -W -5aB -25 HNSHBN
-N -aB SUN SH-pHU -N BapaBa -N-aBH U 3HN UJUNW5e-5 -5aB -25
H a35paW-Ba N5a 3aaIaI TN5eHW a-BW eaN5ea BHa35BaW25WONW-WN-2
-5aB3HNWp-SUNWB/a aeUN 4apaN - W - NUG aVaBN U2
1-B3U-5a UNW3e - 1BapaN5-5pa 1BY B -N 1BpUa XNUN 1BH H5UN-2SH
5ea pH2 aHXW-WN-2WB/a aeUN 4apaN - W -

4g , NaNaB IUWI-SUNWB 35 Ba - Iap3a SHWH XW HpUN XH WWH
-WH1BapaN5aBHWUN U2 a 12-3aI -55ea 5aB UN WHX5ea 1Ua2UNa Ia2paBN
-5aB5H5ea 5a -WNB3e-NNa25HaNWBa 5e-5 -5aBXH 5ea BHa35IHaWN5
WH BHBaBI a 5ea 3e-NNa2

g WN -p-U 2a Ba2U 2a I-5 NUG aVaBN U2 HN-N-NN -2 -WW
ap-2 -5a U 1-35WHX5ea BHa35HN 4 3HNBaNB SUNWON5ea 4 , H5ea a 5aN5
Xa-W2a / ppaNa U5UN UNB VB 35 Ba -N 3HNW5aN5 U5e aa5UN H5eaB -WN
-N/a aN5H a35paW NUG aVaBN U2IUBa35 BHa35 -5aBWBa-IUN SH
BaI 3a W/NX3-N5 4 U 1-35W

g WN -p-U 2a I-5 NUG aVaBN U2 HN-N-NN -2 -WWap-2 -5a
U 1-35WHX5ea BHa35HNNB 5a 3HNBaNB SUNWON5ea 4 , H5ea a 5aN5
Xa-W2a / ppaNa U5UN UNB VB 35 Ba -N 3HNW5aN5 U5e aa5UN H5eaB -WN

MNUN WE STR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

-N/a aN5H a35paW Nug aVaBN U2IUB35 BHa35 -5aBWB-IUV SH
BaI 3a WNU3-N5NB 5a U 1-35W

T Nug aVaBN U2 UNU Ua IUW B-NBa SHN-5pa e- U-5W-N 2Vai
-N N5N 2Vai WNU5pa Wa3laW 5ea U 12a aN5-5UNHX5ea a-WBaW-5
3HNMB 35UN WaWIBHSH-N I BN 3HNMB 35UN g eaBa /BH N IUW B-NBa UW
Ba UaI 5ea Nug aVaBN 1BY B U2UB2 Ia BaWB35UN IUW B-NBa
a 12H aa SBUNV HNWa HNSHBN W-N 2Vai Wa3laWIBFa35UN
a-WBaW eUW U-5UN a-WBa UW aWBUaI X22 UN5ea BXSSTR -5
5eH /e

T Nug aVaBN U2Iapa2HI - - U-5Rapa/a5-5UN RaVHB 5UN -N
HNSHBN BYB BYB H 5-UNV UNI 5XH M -N 4Mg 4 XB
U 12a aN5-5UNUN-22e- U-5-Ba-WUB352 -Xa35aI 3HNMB 35UN-35pUlaW ea
BYB U2UB2 Ia 5ea X22H UN a-WBaWUp-Wpa Wa3laW3HNSH2 SHW12
W2p-/a -N Ba123a aN5 -N e- U-5Ba-e- U5-5UN-N Ba12-3a aN5 eUW
U-5UN a-WBa UW aWBUaI UN1a5-U2UN5ea BXSSTR -5 5eH /e

T aXB /BH N IUW B-NBa HBHeaB-35pUlaW -2XaI H5-NU5W-N
U 2Xa UPH U5W U2Wpa -21BH1HWI 3HNMB 35UN W/UN VHB 1Ua -N
-33aW-Ba-WXB1BaWNBa HXV5 5a HBXaIaB22 2Vai 12-N5HB U 2Xa Wa3laW
Ba3HNMB 35UNWpa W U2HB3 BI BN 5ea -11BH1B5a W-WN-N UN
-33HB-NBa Ue aV 2Vai 1BH1BH2WXBa UaI eaW Wpa W U2 a
3HN 35aI UN-223HNMB 35UN-Ba-W5e-5HB3 BUNBI-BJN R, M4 R44 3e-1-BB2
HBHeaBN-5pa e- U-5W eaW Wpa W-Ba XB5ea 1 BH1W HXI HB aN5UN 5eaUB
2B-5UNW2-5pa 5H5ea 3HNMB 35UN-Ba-W-N -pHU-NBa eaBa Xa-W2a
HNaWHXV5 5a HBXaIaB22 2Vai 12-N5W U2 a 32a-B2 -BaI -11aI -N
Ba3HBaI -2N Ue 5ea N aBWXUN UpU -2WNa-3e 3H2N -N 5eaUB
BaWa35pa 3HN 5UN HB-5UNWHX2Vai -NU -2Wa3laW U2-2W a -BaI
-11aI -N Ba3HBaI H5ea -U a 5aN5Xa-W2a 3HNMB 35UN-Ba-W-N
-33aWBH-IW U2 a-I V5aI 5H-pHU 2HWXUN UpU -22Vai 12-N5W-N -NU -2W
-N I- -/a 5He- U-5WW11H5UN 5eaW Wa3laWNI UpU -2WX2Vai U 2Xa
Wa3laWON5ea R g HeaB5e-N UB W-N HeaB H Ua Wa3laW U2 a 3-15 BaI UX
1HWU2a UPH U5W Ue 5ea -11BH1B5a 1aB U5W-N Ba2B-5aI SHWU5-2a
e- U-5H 5W a 5ea R g

T g eaBa U 1-35W5H2Vai 12-N5Wa3laW-Ba N-pHU- 2a Nug aVaBN
U2Iapa2HI -N U 12a aN5 5H a5eaB Ue 5ea 2V5UN -/aN3 -W2p-/a
1BH1-/-5UN Ba12-N5UN -N HNSHBN 1BY B 5e-5 H 2 5Ua H5e Wai -N
W2p-/aI 12-N5W3HN55 5UN -Ba1BaWN5-5pa W 12a HXa-3e 3H2N HX5ea Wa3laW
5e-5 H 2 a -Xa35aI ea 1BY B U2UB2 Ia a-WBaW5H1aBa5 -5a 5ea
/aN53 2NaW1BaWN5aI 5H5ea -U a 5aN5Xa-W2a ea 1BY B U2 a
-11BpaI 5ea -11BH1B5a BaW Ba 1B5a35UN-/aN3laWIBHSH1UW
U 12a aN5-5UN , 35pUlaWUpH2pUN e-N 2UN HXV5 5a HBXaIaB22 2Vai 12-N5
Wa3laW - Ba Ua 1aB U5W-W a22-W a HB N HX N aB5-N UN XH 5ea
4Mg 4 HB M ea Nug aVaBNW2p-/a 1BH1-/-5UN Ba12-N5UN -N

MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

HNŠBN 1BY B U2UN3H1HB 5a 1BpUWNWXBB3Ba-5UN WU5 2a e- U5-5-N
a-WBWXBB aW 2UWUN W2XWU UNUN 3H2NawHX2U5aI 12 N5Wa3laWWH 2
5ea a-Xa35aI HN5ea p-BH W1Ba35W5aW ea 1BY B U2UN32 Ia 1BpUWNW
XB HNŠBN -N 1aBxB -N3a 3B5aBJ UN32 IUN -N-NN -2-WWW aN5HX
1BY Baw-N 1BpUWNWXBB aI U2-35UNUX1aBxB -N3a 3B5aBJ -Ba N5 aUN
a5

T BUBSH/ BH NI IUS B-N3a HBFeaB-35pU5aW -2XaI U 2Xa
UHZY USW U2Wpa -221BH1HWI 3HNŠB 35UN W/ UN WFB 1Ua -N -33aWW
-Ba-WXB1BaWN3a HXNHN 2U5aI WNW5pa U 2Xa Wa3laW Ba3HNŠB 35UN
Wpa W U25- a 12-3a I BN 5ea -11BH1B5a W-WN-N UN-33HB -N3a Ue
aW 2U5aI 1BFBH2WUXBa UBaI eaW Wpa W U2 a 3HN 35aI UN-22
3HNŠB 35UN-Ba- W5e-5HB3 BUNN-5pa e- U-5WUN5ea apaN55e-5NHN 2U5aI
WNW5pa U 2Xa Wa3laW-Ba H WpaI UN5ea U 1-35-Ba- I BN 5eaW 1Ba 1BHa35
Wpa W NUg aW5aBN U2U 12a aN55ea XZH UN a-WBaw

- HB-5UNW1XNHN 2U5aI WNW5pa -NU -2WX NI I BN 5ea Wpa W U2-2M a
-BaI -11aI -N Ba3HB aI HB-5UNW1X BH UN -NU -2W U2 a
-pHUaI eaBa X-W2a

TN pU -2MXNHN 2U5aI WNW5pa U 2Xa Wa3laWUN5ea R g H5eaB5e-N
UB W U2 a 3-15 BaI -N Ba2B-5aI 5HWU5 2a e- U5-5H 5WUa 5ea R g

- 3 g eaBa NaWUN HXNHN 2U5aI WNW5pa UB Wa3laWUX NI 5HB3 B UeUN5ea
R g pa/a5-5UN32a-BN U2 a 3HN 35aI H 5WUa 5ea NaWUN W-WN

T BUBSH/ BH NI IUS B-N3a HBFeaB-35pU5aW -2XaI H5-NUSW U2
Wpa -221BH1HWI 3HNŠB 35UN W/ UN WFB 1Ua -N -33aWW-Ba-WXB1BaWN3a
HXNHN 2U5aI WNW5pa 12 N5Wa3laW Ba3HNŠB 35UN Wpa W U25- a 12-3a
I BN 5ea -11BH1B5a W-WN-N UN-33HB -N3a Ue aW 2U5aI 1BFBH2WUX
Ba UBaI eaW Wpa W U2 a 3HN 35aI UN-223HNŠB 35UN-Ba-W5e-5HB3 BUN
N-5pa e- U-5W UN5ea apaN55e-5NHN 2U5aI WNW5pa 12 N5Wa3laW-Ba H WpaI UN
5ea U 1-35-Ba- I BN 1Ba 1BHa35Wpa W NUg aW5aBN U2U 12a aN55ea
XZH UN a-WBaw

- H2NaW U2 a 32a-B2 -BaI -11aI -N Ba3HB aI -2HN Ue 5ea
N aBWXUN pU -2WUNa-3e 3H2N -N 5eaUBBaWa35pa 3HN 5UN H5ea
a 5aN5X-W2a 3HNŠB 35UN-Ba-WN -33aWBH1W U2 a 3HNXU BaI 5H
-pHU HB UN Ua 2HWXUN pU -212-N5-N HBI- -/a 5HB3 1UaI e- U-5W

g eaBa U 1-35WHNHN 2U5aI WNW5pa 12 N5Wa3laW-Ba N-pHU- 2a
NUg aW5aBN U2Iapa2HI -N U 12a aN5- W2p-/a 1BH1-/-5UN Ba12 N5UN
-N HNŠBN 1BY B 5e-5 H 2 5Ua H5e WaI -N W2p-/aI 12 N5W
3HNŠB 5UN -N- 12a -N Ba1BaWN5-5pa W 12a HXa-3e 3H2N

T HBI 3a U 1-35WN UHZY U-2Baw BaW NUg aW5aBN U2
Ba-2UN1Ua2NaWH-pHU WNW5pa Baw BaW-N e- U-55H5ea - U a 5aN5

Xa-W2a 41a3U3-2 Nug aVaN U2B-2UN e-W THX5ea 2 Na H2
Ua2Na NHe -B -N 12-3a U-I -3aN5H BaNWH5RH-I 4aa M/ B UN
5ea B XSTR eW U21 55ea BHa35 B2-5aI I U5 B-NBa -55ea aI/a HX5ea
e- U-5-N -pHU U35UN 5ea UN5aB aI U5a SH -5 B R, M44 e- U-5-2N 5ea
aVaN1HBUNHX5ea -2UN aN5

T H3H 1aNW5a XB1aB -Na52N 5aB -N 5a 1HB22HWaWHX
R, M44 e- U-5-N R, M44 e- U-5p-2 a Nug aVaN U2-3 Ua XBapaB
HNa -3B U 1-35aI - UNU HXHN -3B HX/HH -25 e- U-5HXW U2-BHB
/Ba-5aBe- U-5p-2 a 5e-N5ea R, M44 -Ba- U 1-35aI 5ea 2 Na H2 Ua2Na
-N I aI U-5a UUN1aB a5 U -W e- U-53HNWp-5UNa-W aN5-Ba- HBHeaB
-11BIBJ5a I aWUN-5UN -N 1BpUa XN UN XB5WX5 Ba -N/a aN5-WN 5pa
e- U-5UN1aBa5 U ea -3 UaI R, M44 e- U-5-Ba- H 2 Ua-2 a
3HN5U H W Ue a U5UN e- U-5-2a-I W5-Wa UN5ea g 4 , HBHeaBI aI U-5aI
R, M44 e- U-5 TX/HH -25 e- U-5UNW3e -2B-25 UNH5-p-U 2a XB
1 Be-W -p-U 25 HXHeaBR, M44 e- U-5 U2 a UPaWU-5aI Ue 5ea
H a35pa HXH 5-UNU /HH -25 e- U-5Na-B5ea BHa35-Ba- T 12a aN5-5UN
HX5eW U-5UN a-WBa U2 a W a35H5ea Ba Ua aN55e-5W3e 2N 5aB
U-5UN-N Ba1HBUN 12-NWXBW3e-3 U5UNW Ba SH a-11BpaI 5ea
eIaXHX5ea U5UNHXg -5aBRUe5WX5ea 45-5a g -5aBRaWI BaW HNB2 HB
1BIBSH5ea 3HN5B 35UNHX5ea 2 Na H2 Ua2Na

T Nug aVaN U2 HNSHB-N Ba Hpa Unp-Wpa NNN-5pa Wa3UaW
aV 2WUN UN5ea 3e-Na2-N -I -3aN5R, M44 e- U-5W a5 aaN4apaN - W
- -N U2 Ba -B a5Wa3UaWNB2 I a Wa3UaWHX5 -BW HBW253aI -B
*Tamarix W1 XI N5 UN/ B WW Pennisetum setaceum -N / UN5BaI Arundo
donax* eaW Wa3UaWaV 2W UNe- U-5WWU 2a XB4 R -N 4-N5 , N
RUpaB H2 W-B-N e-pa 5ea 1HaNU2SHWBa-I X5eaBUNH-I -3aN5WU 2a
e- U-5-Ba-W TNSU23HNB2 U2 a aV 2W aI W -3H UN-5UNHX1e W-2
Ba Hp-2-N eaB U-25a-5 aN5 W -11BIBJ5a aNpUN aN5-2WX/ -B W
aB U-5UaW U2 a WI 1 BW-N5H -N X35 BaBWN5B 35UNW-N V-N-B
a-WBaW U2 a 5 aN5H-pHU U 1-35WH -5aB -25 HSHWpaB 2X2H
1 5a-5 aN5W H 2 a -N5U-5aI I BN 5ea X5V a-B Ue X2H 1
HNSHBN -N 5a-5 aN5W-5a-WHNa -NN -22 UNaNWUN a-BW

T Nug aVaN U2Iapa2Hl - 1BIB UN3HB UN-5UN Ue
4 -/aN3 1-B5U-N5WHW2a35pa2 BaVH 4 R -N 4-N5 , N RUpaB
H2 WBe- U-5 W e- U-5 -NU 2-5UN aU5eaB a3e-N3-2 a-NWB
eUe 1BaWBa -5aB SHa Hpa pa/a5-5UN-N 2a-pa XaW2 I a1HWaI WN -N
W5 W 2-5UN 5ea e- U-5 BaNa UN -XaB -5e HXN-5 B2XHI UN eW U2 a
IHNa W -N-I-15pa -N/a aN5-11BH3e Ue UN 5XH 4
V aeH2 aBW TX5ea eUe 1BaWBa -5aB a5eHI UW WI -5aB U2 a 1UaI
Nug aVaN5H-Ba-WHXWU 2a e- U-5 , eUe 1BaWBa NH 2a U2 a
I U35aI -52B-2UaI -Ba-WX5e- U-5I a5aB UNaI SH a WU 2a XB4 R -N
4-N5 , N RUpaB H2 W-B-XaBBaNa -2 ea NH 2a U2 a e-N HlaB 5aI HB
HlaB 5aI XH -2Ue5paeU2a Ba-5 aN5W U2 a -33H 12W aI UN- BNH UaI
2B I aWUNSH-2H a 1aBU aN5-25aWUN HXp-BJ 2aWW3e -W B 5UN-N
MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

UNaNV5 HXWB -11 UNHX32a-NWN V-WNHXI UV B-NBa -1123-UNHX
Wai pW-2H UN N-5 B2I UWaB2 aS , B/HBH W HNSHBV 1BY B XNai
Nug aVaN U2 a aV 2Uwai SHaN 2a 5ea IXXBaNaW HN
a laBU aN5-25a-5 aNWSH a Ia5aB Unai ea 1BU -B UN U3-SHBHXW33aVW U2
a B2-5ai SHIapa2HI aN5HXe- U-53e-B35aBV53WUaN5Uai Ue 1UNaB5H
UN5aB ai U5a R, M4 e- U-5 UeUN eUe 4 R-NI 4-N5 , N RUpaB H22 V5B
1HI 2-5UNW5-pa aaNIHB aN5ai eaW 3e-B35aBV53W Ba IHB aN5ai UN5ea
25aB5 Ba -NI U2 a Wa3Uai -Wl-B5HX5ea Nug aVaN1BY B ea
1BY B U2 a-I V5ai -11BH1B5a2 -W5aW25W5H a-B2aBaXHBW a3H a
-p-U2 2a ea IaWUN-NI U 12a aN5-UNHX5ea HN HUN aXHB U2 a XNai
Nug aVaN-NI 3HN 35ai B1BaVN5-5paWHX Nug aVaN Ue UNI 5XH
5ea 4Mg 4-NI M , 3H 12a5a IaWBI5UNHX5eUW a5eHI UW 2WUN2 IaI
UN, 11aN U S HX5ea B XSTR 4a35UN Nug aVaN3H U5H
-3eUpUN - UUN-5UN1aB5B -NBa V5N-B HX5aV5BN -3BaWHUN5aB ai U5a
SH2-5a V5/a R, M4 e- U-5H5ea a-B HBUN5aB ai U5a V5/a R, M4 e- U-5
I BN 5ea X5V5 aN5 a-BWH BHa35U 12a aN5-UN

S aXB a/ UNUN 3HNSB 35UN - VAI U aN5-UN-NI aBWN3HNSB2
12N U2 a 1Ba1-BaI Nug aVaN-NI W U5ai SH5ea 4, Rg XB
-11Bp-2 TN-11UN - 45B g -5aB H22 UN BpaNUN 2N 4g U2 a
1Ba1-BaI Nug aVaN-NI W U5ai SH5ea 4, Rg XB-11Bp-21B5SH
3HNSB 35UN g eaB 1HWU2a aBWN3HNSB2 a-W5aW U2 a U 12a aNai
Nug aVaN aXB a/ UNUN HB UN5ea BUN V-WN H UNU Ua V5H5
5aB U 1-35W WBU5ai Ue aBWN-NI HXV5a W5-UNHX5ea 4, R V5N-B
aBWN-NI VAI U aN53HNSB2Xa-5 BaW U2 a VAI I BN -NI U ai U5a2 -XaB
/BIUN -NI a 3-p-5UNW, 4g UW Ba Ua aN5HX5ea aNaB2 HNSB 35UN
45B -5aB S4 aB U

S Nug aVaN U2I Ua355ea 3HNSB 35HSHUNV 22 1B5SHI a
-5aBN -35pU5aWaNaB I UWI-5UN1ap3aW-5I U5e-B a 1HNSW5H1BpaN5
aBWN 4aI U aN5-UN -W5W3e-W5B -2aW2NaI Ue X2aBX B3 U2 a
VAI -5Ia -5aBN I U5e-B a 1HNSW5H1BpaN5a 3aW5H N5a- VAI U aN5-UN
eaW -W5W U2 a 3HNSB 35ai aXB Ia -5aBN -NI Ba/ 2B -UN5 Unai
I BN 3HNSB 35UN UN2 I UN -XaB5HB apaNWSH aa1 5ea UN/HI HB UN
HB aB , HNSB U2paBX aXa35pa HI aB 5UNHXaNaB I UWI-5UNXa-5 BaW
I BN Ia -5aBN

S Nug aVaN U2U 12a aN5Ba3H aN-5UNW5 2Uwai UN-
W5a Wa3U3/aHa3eN3-2Ba1H5 1Ba1-BaI - 2Xai /aHa3eN3-2aN UNaBHB
aN UNaBN /aH2H V5 ea Ba1H5 Ba3H aN-5UNW U2 a -VAI HN-
3H 1Ba5aWpa ap-2 -5UNHXW5Ia V5 U5 V5W U -NI VAI 23HN 5UNW5e-5 -
-Xa353HNSB 35UNHX5ea 1Ua2NaW-NI Ba2-5ai X3U5aW Ra3H aN-5UNW U2
a 3HNSW5a5 Ue 1BpUW5NWX -2XBNU HI a HXRa/ 2-5UNW U2a
HNSB 35UN4-Xa5 BaBW BHa35/BIUN -NI a 3-p-5UNW U2 a H WpaI
- /aHa3eN3-2aN UNaB aN UNaBN /aH2H V5 HB5eaB -2Xai Ba1BaVN5-5pa
SHpaBX 3H 12UNa Ue Ba3H aN-5UNW5ea /aHa3eN3-2Ba1H5 ea
/aHa3eN3-2UNpaVU-5UN U2 a 3H 12a5ai UN-33HB -NBa Ue

MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

- 41a3U2 23-5UIN Guidelines for Evaluating and Mitigating Seismic Hazards in California

4H 5aBN -2XBNU S-Be - a aN5aB Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California 4 S

S NUg aVaBN U2U 12a aN5 WUW U Ba2 5aI Ba3H aN-5UINW 3HN5 UNaI UN- W5a Wa3UX3 / aH5a3eN3-2Ba1H5 - WUW WU UN S 5H UNU Ua WUW U-22 UN 3aI I- -/a 5H5ea 1Ua2UNa

S , -5aBXH W 5HX a3e-NW U2 a UNW 2aI NUg aVaBN -55ea 2 N a H2 Ua2UNa TN5 a 4B 35 Ba 5H5aB UN-5a XH U aI U5a2 X2H UN - 2-B a a-Be - a UN5ea p3UN5 HX5ea Wa

S NUg aVaBN U23H 12.5a a aB aNB Ba1-UBW5H5ea 1Ua2UNa -N HBa2-5aI X3U5a WUN5ea apaN5HXWUW U-22 UN 3aI I- -/a S -N S U2 a -112aI 5H5aI 3a aBUNW Ba2 5aI U 1-35W WBU5aI U5e W2I U5 B-NBa I BN a aB aNB Ba1-UBW

S NUg aVaBN U2U 12a aN5- /BH N -5aB2apa2 HNSHBN 1BY B WU I-5 XH TN a g a2W eUWUNB -5UIN U2 a WU UN 3HN NB5UIN U5e XBa3-WWHX/ BH N -5aB2apa2W aBpaI XH NUg aVaBN UN5a/ B 5aI WBX3a -N /BH N -5aB H a2W5HU aN5UX 5a N WUN/ BH N -5aB 2apa2W-N U aN5UX 3e-N a WUB 352 -5BU 5- 2a 5H5ea BHa35 H5ea a 5aN5 Xa-W2a /tpaNa U5UN UNB VB 35 Ba, -N 3HNW5aN5 U5e aa5UN H5eaB -WN -N/a aN5H a35paW NUg aVaBN U2I Ua35 BHa35 -5aBWBa-I UN 5H2U U5 eUe /BH N -5aB3HN 5UINW/ BH N -5aB U5UN Xa5HX/ BH N WBX3a UN 5ea p3UN5 HX apU -N HN 5a Ba U2 Ba -N -Ba- WUN5ea XBa - -N UN5aB aI U5a -Ba- HX5ea 4 ,

S NUg aVaBN U2U 12a aN5- /BH N -5aB2apa2 HNSHBN 1BY B WU I-5 XH TN a g a2W Wa M/ Ba eUWUNB -5UIN U2 a WU UN3HN NB5UIN U5e XBa3-WWHX/ BH N -5aB2apa2W aBpaI XH NUg aVaBN UN5a/ B 5aI WBX3a -N /BH N -5aB H a2W5HU aN5UX 5a N WUN /BH N -5aB2apa2W-N UW2-5a 3e-N a W-5BU 5- 2a 5H5ea BHa35 H5ea a 5aN5 Xa-W2a /tpaNa U5UN UNB VB 35 Ba, -N 3HNW5aN5 U5e aa5UN H5eaB -WN -N/a aN5H a35paW NUg aVaBN U2I Ua35 BHa35 -5aBWBa-I UN 5H2U U5 1H5aN5U2XBW W aN5a UN5ea BaWBa HNa -Ba- HX5ea 4 ,

, NUg aVaBN U2aN3H B/a 5ea 3HNB 35HBSH W a 2W5aI I laW2 Xa2UN3HN5B 35UINa U aN5 eaBa Xa-W2a W HX5eUW-2aBN-5pa I laW2 Xa2 H 2 BaI 3a -N a UWUNW -N 1aBaN5 Ba Wa35pa2 XH 3HNpaN5UIN-2I laW2 , R

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5ea IUWHpaB U2 a e-2aI HBBaIUa35aI 5Hf5eaB-Ba-W NS25ea IUWHpaB e-W
aaNIHB aNaI - -2XaI -Be-aH2H UWHB1-2aHNS2H U5 -N UMIHaNSU2
W/NX3-NBa ap-2 -5aI 3HNW5aNS Ue S , RaWI BaW3HNW aBaI W/NX3-N5
U2 a -pHUaI Ba35BaI aW/N TX-pHU-NBa UNH5X-WJ2a 5ea BaWI Ba U2
a W a35H- I-5 Ba3HpaB U5U-5UN1BH B -W-11BHIBJ5a TXe -N
Ba -UNW Ba IUWHpaBaI 5ea HN5 HBNaB U2 a 3HN5-35aI -N -221HBaI BaW
Ba UaI 5ea -2XBNJ a-2e -N 4-Xa5 HIa W35UN 45-5a S ,
Ua2NaW35UN a -N R 4a35UN U2 a X2H aI

R BHHWI 3HN5B 35UNHX5ea 2 Na H2 Ua2Na U2-pHU 1e W3-2
U 1-35WH5ea MBNBW 52a g aUB - 5H5ea a 5aNSX-WJ2a TN5ea apaN55e-5
-N 1H5UNHX5ea MBNBW 52a g aUB - H2 a HI UaI HBI a H2UaI -
-2XaI -BeUa35 B2eUWHBN U21BaI-Ba -eUWHB3 Ba3HB-5UNHX5ea MBNBW
52a g aUB - UN5ea 3HN5a 5HX5ea HNWp-5UN UWHB35 W BH NI -5aB
WB-IUW W5a ea Ba3HB-5UN U23HN5B 5H5ea W-N-B WfXaU5eaB5ea
UWHB3, aB3-N UUNW4 pa , 4 HB5ea UWHB3, aB3-N
SN UNaBN Ra3HB , SR

R BfB5H3HN5B 35UN-35pUaW-2HN 5ea W/ aN5HX5ea 2 Na H2
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-N2 U2 a 1Ba3UW2 -11aI HNaN UNaBN IaW/N12-NW5HUaNSUX eaBa 5ea
3-N-2X2W UeUN5ea 3HN5B 35UN3HBBJHB a 1HB B XNBUN U2 a 12-3aI
Xa5WI 5e HX5ea 3-N-2-2HN 5ea 1H5UNHX5ea 3-N-25e-5X2W UeUN5ea
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a U aN5HBpaeU2aW U2 a -2H aI N5e HX5ea XNBUN

R TXUWN5a3aWB 5HUN5-225ea H5HN -N HN HNa35HBT Ua2Na
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T

- , 3HN5B 35UNNHUW HNSHB UaNSUXaI 5ea Ba351BH1HN5W U2 a
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3H 12-UN5W

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1 H3HN5B 35UN U2HB3 BHN aa aN WBeH2U- W

3 HUW / aNaB 5UN 3HN5B 35UNa U aN5 U2 a 2aW5e-N a-BWU HB UX
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I HN5B 35UNa U aN5 U2 a -33aWBUaI Ue 5ea -N X35 BaBW
Ba3H aN aI NHUW -55aN -5UN I apUaW3e -WU N X2aBWBW2X
-I WUN -3 1-2-B W-N a -11BH1B5a2 -UN5-UNaI

a TNNHUW WNW5pa -Ba- W5a 1HBB NHUW -BaBW U2 a 2B-5aI -BH N eUe
NHUW / aNaB 5UN a U aN5

X 23a aN5HX3HN5B 35UNa U aN5I BW 5U aWUXH1aB 5UN U25- a UN5H
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/ g eaBa NHUW 2apa2W Ba 1a35aI 5H a eUe -Ip-NBaI -BNUN UN B5UN U2
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, NUG aW5aBN U2I Ua355ea 3HN5B 35HB5H -W H 53HN5Ba 5B 3 W
UN- I aWUN-5aI -Ba- eaBa 5ea -5aB23-NN5BNHXUN5H5ea W5a- HB1aBH2-5a
UN5H5ea / BH N -5aB eUW-Ba- U2 a Wa3UaI HN-22-1123- 2a 3HN5B 35UN
12-NW-N a UN12-3a aXBa -N 3HN5Ba 5a UMH BaI NUG aW5aBN U2I Ua355ea
3HN5B 35HB5H WpUa 3HN5B 35UN paeU2aWUN- -NaB5e-53HN5 UNW2 U W W3e
-W2 B3-N5W Ue UN-NU 1aBpUH W-Ba- 5H-pHU WU2 Ba2-5aI -5aB -25
U 1-35W

, NUG aW5aBN U2I Ua355ea 3HN5B 35HB5H UNWa35-NI -WNa3aWB
WpUa -22a U aN5 aXBa U aNaB W5ea 3HN5B 35UN W5a -N Ba / 2-B2 5eaBa- XaB
-N aXBa HB UN U aI U5a2 -I -3aN55H5ea 4, R HB-N H5eaBI B UN / a HB
3Ba 5H-pHU a U aN52a- Ba2-5aI -5aB -25 U 1-35W NUG aW5aBN U2
I Ua355ea 3HN5B 35HB5H Ba1-UB-N 2a- WBeHW W55UN WUN 1HB3HN 5UN aXBa
5ea a U aN5 a / UNW HB

, NUG aW5aBN U2I Ua355ea 3HN5B 35HB5H 1Ba1-Ba - WU2 1Ba paN5UN
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5ea 3HN5B 35HB5H X2H 5ea WU2 1Ba paN5UN 12-NI BW BH a353HN5B 35UN 5H
1Ba paN5 WU2 Ba2-5aI -5aB -25 U 1-35W eUM2-N U2UN2 Ia 5NH5
Na3aWB2 a 2U 5aI 5H

- 41a3U3 aB aI a U aN5 -UN5aN-Na -N BaXa2UN -Ba-W

aB aI -N 2NaI e- -BH W -5aB2WB / a -Ba- WFNW5a 5e-5-Ba 3HpaBaI
I BW 5ea B UN W- WN

3 - -BH W -5aB2WU232a-N 1a U aN5HNW5a a / - WB aN51-I W
W Hpa2W-N - / W5H3HN5-UN3HN5- UN-5aI WU2

I g HB aBWB UNaI UN5ea 2B-5UN-NI W HX32a-N 1a U aN5
MN UN WESTR XB4-N5 , N R paBg -5aBRUe5, 1123-5UNW
-Be

, WNW -p-12 2a I-5 UN3HN NBSUN Ue 5ea UN5a/B 5aI WBK3a -N /BH NI -5aB Hla2W NUG aV5aBN U2UaN5CX /BH NI -5aB5aI WUN32 IUN 12 a Hpa aN5-NI UW2-5a 3e-N aW-5BU 5- 2a SH5ea BHa35 H5ea a 5aN5 Xa-WU2a /lpaNa U5UN UNB VB 35 Ba -N 3HNW5aN5 Ue aa5UN H5eaB -WN -N/a aN5H a35paW NUG aV5aBN U2IUBa35 BHa35 -5aBWB-IUN SH2U U -IpaB12 a Hpa aN5W

, NUG aV5aBN U2 - a -N-2aBN-5pa -5aBW112 -p-12 2a SH 1-BlaW Xa35aI 3HN5- UN-5aI a2W5H5ea a 5aN5-NI XB5ea I B5UN5e-55ea 3HN5- UN-5UNUW3- WI BHa35HlaB5UNWHB1BhpUa 5a-5 aN5XB- Xa35aI a2W-5 NUG aV5aBN WI U5B5UN ea-2aBN-5pa W112 HB5a-5 aN5XB -Xa35aI a2W U2 a -Ia -p-12 2a XB-22SU aW eaN1aBUNaN5 -5aB -25 W5N-BWBa 3aalal -W BaW25HX5ea BHa35

, NUG aV5aBNW-22N5WBa-I -5aBI lpaBaI HBWHaI 1 BW-N5SH 5ea BHa35UN5ea -35 W41Ba-IUN -N MHI HNB2 -WNWBH5eaB2B-5UNW HpaB UN 5ea RU2H H2HN -WN N52 NUG aV5aBNe-pa 3H 12a5aI 5ea Iapa2HI aN5HX- /BH NI -5aB Hla2HX5ea RU2H H2HN -WN5e-5UN32 IaW H 5I 5aWU -5aWHX5ea U 1-35WHX5ea BHa35HN/ BH NI -5aB3HN5- UN-N5W TN 5ea apaN55e-55ea Hla2WH W5e-55ea BHa35 H 2I 3HN5BU 5a SH5ea 3HN5- UN-5UNHX-N a22 WI SH1BhpUa - WI Ba HX1H5- 2a -5aB NUG aV5aBN U23H 12 Ue 5ea 5aB WHX , 1BhpUUN -N -2aBN-5pa WI Ba HX1H5- 2a -5aBH5a-5 aN5HX-Xa35aI a22W BN 5ea laBHI eaN5ea BHa353HN5BU 5aWH-Na 3aalaN5a HX-1123- 2a -5aB -25 H a35paW

4 BN 3HN5B 35UN NUG aV5aBN U2-BN a SH W X3U5aWHX5ea 4-N5 , N- RlpaB U2 Ba HlaB5pa g -5aB BHa35, /Ba aN5SH - a Ia2paBaWH2B-2 WBW5e-5 H 2I H5eaB UW Ba3aIpa -5aBXH 5ea 2 N a H2 -WW Ua2Na TXa 3e-N a 3-NN5Ba12-3a IUB 15aI Ia2paB NUG aV5aBN U2XBUNW 4g -5aB-WBa12-3a aN5W112

4 BN 3HN5B 35UN NUG aV5aBN U2-BN a SH W X3U5aWHX5ea 4-N5 , N- RlpaB U2 Ba HlaB5pa g -5aB BHa35, /Ba aN5SH - a Ia2paBaWH WBW5e-5 H 2I H5eaB UW Ba3aIpa -5aBpU 5ea 4 S RlpaB BHWV H5e MB -N-2 ea -Xa35aI W35UNWHX5ea 4 S RlpaB BHWV H5e MB 3-N-2W-2 a Ba12-3aI UN UN -XaB3HN5B 35UN TXa 3e-N a 3-NN5Ba12-3a IUB 15aI Ia2paB NUG aV5aBN U2XBUNW 4g -5aB-W Ba12-3a aN5W112

4 a2paBaW5e-5 H 2I e-pa HB3 BBI SH5ea 4-N5 , N- RlpaBWBa-IUN /BH NI WpU 5ea HNWp-5UN U5B35 -N-2 U2UNW5a-I HB3 BpU a U5UN NU X3U5aW, XaB3HN5B 35UN 5ea -Xa35aI W35UNWHX5ea 3-N-2 U2 a Ba12-3aI Ue -NUN UN VB 35 Ba

4 -BHX5ea e-W T 2 N a H2 Ua2Na 3H 2I a Ba12-3aI - 5 Nn2 -N 5ea 2a N 5e HX5ea e-W TIT 2 N a H2 Ua2Na 3H 2I a WHE5aNaI , W

MN UN WESTR XB4-N5 , N- RlpaBg -5aBRUe5, 1123-5UNW -Be

WH NUNMU Ba NaB5eUW U5U-5UN a-WBa - 5 NNa2 H 2 a U5
 XH - 1HUN5 WVI 5e -N aVHX 52a g aUB ea 5 NNa2 H 2 a 5aN
 WI 5e aVaE 5eBH / e 5ea H N5-UNWB-11BH U -5a2 Xaa5 , 55ea -W HX
 5ea H N5-UNW5ea 5 NNa2 H 2 5BNW5UN5H-N NaB BH N 1Ua2Na eUe
 H 2 a 5aN XB-11BH U -5a2 Xaa5 aXB eHH UN 1 SH- p-2pa VB 35 Ba
 -55ea MHeU Ua2Na 5aB UN W NaB5eUW U5U-5UN a-WBa 5ea IaWNaI
 3Hpa -Na 3-1-3U5 H 2 a 3XW5eH / e 5ea HlaB 5UN 3-1-3U5 H 2 a
 2U 5aI SH 3XV N52 e-W TTHX5ea 2 Na HE2 Ua2Na -W3H 12a5aI TN
 5H5-2 Ue 5eUW U5U-5UN a-WBa -2UN aN5HX5ea 2 Na HE2 Ua2Na e-W T
 H 2 a -11BH U -5a2 Xaa5 a 5H5ea IUXaB N52B-5UNHX5ea e-W T
 -2UN aN5 e-W TTHX5ea 2 Na HE2 Ua2Na H 2 -2Me-pa SH a WI a e-5
 HI UaI aB5eUW U5U-5aI -2UN aN5 e-W TTHX5ea 2 Na HE2 Ua2Na
 H 2 5aN aV -B -3BHW H Ba NHeaE 1-BHX5ea 4, R 5e-N H 2 HB3 B
 NaB5ea BHa35-N -W BaW5 5eUNa -2UN aN5HX e-W TTHX5ea 2 Na
 HE2 Ua2Na H 2 a WI a e-5W H5aB-11BH U -5a2 Xaa5 2HN 5e-N
 NaB5ea BHa35 Xaa5 ea H MH HNa35B H 2 Ba -UN-W
 1BH HMI 5ea BHa35 Xaa5 2HN 5eH / e Ue 5ea HI U3-5UNWH5ea
 2 Na HE2 Ua2Na 5eaW 5 H1UaW H 2 e-pa -3H HN5BaNe XBHN2
 - H 5 Xaa5 B5eaB5e-N Xaa5-W H 2 HB3 B NaB5ea 1BH HMI
 BHa35 g Ue 5eUW U5U-5UN a-WBa 5ea XH5I U a5aB 2 Na HE2 Ua2Na
 H 2 a UNW a-N XH5eH BaW Ha W-1aI 5 NNa2 ea BB 5eBH / e eUe 5ea
 5 NNa2 H 2 a 3HN5B 35aI UeUe2 XB 35 BaI -N 5ea Vaa21Ua H 2 a
 WBB N aI Ue 3HN5Ba 5a -3 X22 ea 5 NNa2 H 2 a 3HN5B 35aI WV - I B22
 -N 2V a5eHI -N -Va BB H 2 a V N5SHNa-B -// Ba/-5a X3U5aW
 HN5B 35UN-3pUaW H 2 2V 1SH- a-B Ue 5ea I B22N 5- UN - H 5
 HNeW-N -3 X22N -NHeaB HNeW HN5B 35UN H 2 HB3 BW I- WaB
 aa ea BH 5a NaB5aW2-N WHX5ea 4-N aB-N B UNH -5UN-2MHaV

4 NUg aVaBN U2I Ua355ea 3HN5B 35B5He-pa - -2XaI 5B X3
 aN UNaaB1Ba1-Ba -N U 12a aN5- 5B X3 -N/a aN512-N5e-5IaXNaWeH
 5B X3 HlaB 5UNW U2 a -N/aI -N -UN5-UNaI HNBHI - W BN a-3e 1e-W
 HX3HN5B 35UNUN2 I UN -N IaSH BWWN/a 2-Na 32HWaWHB 5U5 Ba2B-5UN
 HB ea 5B X3 -N/a aN512-N U2Wa3UX Na3aWVB 2-Na 32HWaWI aSH BW
 -N WUN/a 2Ue5UN X2//aBW-N H5eaB5B X3 3HN5B2 a-WBaWNaI aI SH-pHU
 -33UaN5W-N 1BpUa -33aWVH5W aN5W-N a aB aN3 BaWHNW paeU2aW BN
 3HN5B 35UN

4 NUg aVaBN U2I Ua355ea 3HN5B 35B5H Ba / B I a - 1-5e - -
 1H5UNHX eUe -WXB aE WI -W BHI I BN 5ea 3HN5B 35UNHX4apaN
 - W - 1/BI UN 5ea 1-5e - 3H 2 UN2 Ia Ba1-UNW HBB12-3UN Ue -
 2Ua VB 35 Ba 3 2pa5HB5a 1HB B 3BWN 5ea a U5UN BU/ UN HpaB5ea
 HNaB-5UN U5B353-N-2 BN BHa353HN5B 35UNUN5ea 4-N5 , N RUpaB
 HN5B 35UN, Ba- NHN3HN5B 35UNpaeU2aW U2 a I Ua35aI SH5eUW aSH BH 5a
 Wa MU Ba eUW aSH BH 5a U2-2H - 5eHBUaI paeU2aW HaNaB5ea
 4apaN - W - -33aWVH5I -5- 1HUN5NHea-VHX5ea BHI 32HWa -2H UN X22
 -33aWVH5ea 4apaN - W - HlaB 5UNW U UN W4 S 4, R H aB H W

-N 4apaN - W - NUG aVABN U21HPUa W3 B5 -5eUW aSH BBH I SH
1BapaN5 N 5eHBUaI -33aW5H5ea I- W5a

4 BV 3HNMB 35UN NUG aVABN U21UB35NN3HNMB 35UN
paeU2aW5e-5Naal SH-33aW4apaN - W - -N RaWpHUBSH-N-2aBN-5a-33aW
SH4apaN - W - Wa M/ B eUW aSH BBH 5a U2-2H - 5eHBUaI
paeU2aW5HaNaB5ea I- W5a-55ea B/ e5- 5 aN5HX4apaN - W -
NUG aVABN U21HPUa W3 B5 -55eUW-2aBN-5a-33aW5H I I BV
3HNMB 35UNHX5ea e-W TIT 2 N a H2 Ua2Na-N H MH HNa3SHBH
1BapaN5 N 5eHBUaI -33aW5H5ea I- W5a

4 , 23HNMB 35UN3HNB 35HW U21HPUa aa 2 11-5aW5a/-B UN
3HNMB 35UNW5eaI 2aW-N BH I 32HW5aW5H2B-21H23a -N XUB BWU35UNW

4 , 23HNMB 35UN3HNB 35HW U2NH5X -22aW aN5WUN5ea 3HNMB 35UN
-Ba- - UNU HX aa aXB a/ UNNU 3HNMB 35UN

4 , 23HNMB 35UN3HNB 35HW U23HUB UN 5a 3HNMB 35UN-35pU5aW
Ue 2B-2a aB aNB WpUaW1H23a XUB 1-B alU 5ea 4 H5-24aBpUa
WeH2 W-N N5BNWHIaB 5HBWIa2paB WpUaW-N 2B-2B X W 3H 1-NaW
SHaNW5a 3HNUN U HX5eaW WpUaW

4 , 23HNMB 35UN3HNB 35HW U21H5 -BNW W/NW-N 3HNMB 35
-BaBWH1BapaN5IaI aV5BNWXH UN-Ipa5aN2 aNaBIN 3HNMB 35UN-Ba-W5B
X2UN UN5HIIaNa5aNa5eaW HNB 35HW U2-2W aNWBa 5e-5 BH a353HNMB 35UN
-Ba-W5e-pa aaN1BHlaB W3 BaI aXB 2a-pUN 5ea HB W5a-55ea aN HX5ea
I- a-W5aW - UN2 Ia 3HpaBN 5aNa5eaW-N HBUN5 2UN 5a 1HB B XNBUN
-N WX5 2/ e5W

4 HNWN5 Ue 5ea IUB35UNHX5ea 4apaN - W, 33HB SH-pHU -
W/NX3-N5aX35HN/ BH NI -5aB2apa2W-5HNa HB Ha UN a a2W2B-5aI
H 5WJa 5ea BaW5a HNa NUG aVABN U2WBa-I WXX3IaN5 -5aBSH -UN5 UN
W5 53 / BH NI -5aB2apa2W-55ea-X35aI UN a a2W HU 12a aN55eUW U5U-5UN
a-W5a NUG aVABN U2 W- / BH NI -5aB HNSHBV 1BY B -WI HN
UNXB -5UN I aBpaI XH 5ea UN a a2W eUWUNXB -5UN U2 a WI UN
3HN NB5UN Ue X3-5WHX/ BH NI -5aB2apa2W aBpaI XH NUG aVABN
UN5a/ B 5aI W5X3a -N / BH NI -5aB H a2W5HU aN5X 5a N WCN/ BH NI -5aB
2apa2W-N UW2-5a 5ea W-B HX3e-N a-55BU 5- 2a SH5ea BH a35 Ra alU2-35UN
U2 a U 12a aNaI 1BHBSH-N-35 -2 XH5BaI 35UN aUN Ba-3eaI SH-pHU
5ea W/NX3-N5U 1-35

C. Benefits of the Project

g -5aB4 112 Ra2U U5

ea Ba/ UNW5paI NUG aVABN Ba2aW5H- W/NX3-N5Ia/ Ba HNU 1H5aI -5aBW112aW
ea5eaB5eBH / e 5ea 45-5a g -5aB BH a35 4g 5ea H5BIHRUpaB, al 35 HBXH H5eaB

MN UN WESTR XB4-N5 , N RUpaBg -5aBRUe5, 1123-5UNW
-Be

WI BaW 4UNa eUW3-2 -p- U 2a 2B-2WI BaW-Ba X2 WI a UUN Ia -N WX5 Ba
WBW U2 a HBIalaNa5HNU 1HBIaI HBNa WI BaW ea BaU U5 HXeaW U 1HBIaI
WI BaWX -5aBUWa32UNU I a SH -5aB -25 3HNBaBNWI BH / e5 2a / -2-N UNW5 SUN-2
BaWB UN5W-N aNpUBH aN5-23HNBaBNW

TNHB aB5H aa55ea X5 Ba Naal WHX- / BH UN 1HI 2-SUN NUg aVaN3-NNH2HN aBa2
WLa2 HNU 1HBIaI -5aB5H aa51BH35aI Ia -N W TNW-I NUg aVaN -N 5ea Ba5-U
-/aNBlaw UeUN5eaUBBaWa35pa WpUa -Ba-W-Ba UNaN UN SHa 1-N 5ea IpaBW HX5eaUB -5aB
W112 1HBIaI 5e-5UN2 IaWa UUN U 1HBIaI W112aWa UUN -N X5 Ba -5aB
Ba32 -SUN a UUN -N X5 Ba -5aB3HNWp-SUNaXBW Ba3-25e-55ea BH35UN2 IaW
U 1HBIaI -5aB3HNWp-SUNSHBI 3aIa -N -N 5ea Iapa2HI aN5HX N WI N-5pa -5aB-W
IaWBUal UN5ea BH35 eaWp-BH WBI BaWX -5aB-Ba -p-U 2a -5IUXBaN5U aW-N UN
IUXBaN52apa2WX -25 -N -N5 UN3H UN-SUN 5eH / e 5eaW IUXBaN5WI BaWX -5aB
HXBa NUg aVaN W3HNW5 aN5W5ea - U5 SHU 1Hpa -5aBW112 BaU U5 SH5ea / Ba-5aW
a 5aN5X-WU2a TN2Ue5HXBa3aN5apUaN5a HN32U -53 p-BU U5 1-B3 2-B 5Ba BN I-5
BaXa35UN a 5aN aI BH / e5WUN -2XBN -N 5ea 4H 5e aVaN N5aI 45-5aWU 1HBU -5aB
W112 BaU U5 UN-NU 1HBI-N5 aNaX5XB5ea 1 23

1aB SUN-2Ma UU5

, IpaBWAi -5aB 1HBIaI -2WI aNaX5W5ea 1 23 -2H UN -5aB-/aNBlawSH a55aB
-5e p-B UN Ia -N WXB -5aB Ue -p-U 2a W112aW aa5UN p-BU 2a -5aBIa -N Wa /
W- WN-2p-BU SUNWNIa -N XH UN5aBHW aB-N -NN -2p-BU SUNWNIa -N XH a5
a-B5HIB a-B Ue p-BU 2a WI BaWXW112 -2H WXB5ea HWaX3aUN5 W HX -5aB-N
UN1-B3 2-B-2H WXB -5aBW112aW5e-5-Ba WB2 W5Hia -N W-5- / paN1HUN5UN5U a SH a
VBIa XB2-5aB W , IpaBWAi -5aB 1HBIaI 5e-53HNW5WX- N aBHXI UXBaN5WI BaW
HXW112aWUaWUN5U2XBW3e 3HBI UN-5aI -N/a aN5

, 2MaWUN5U2SH3HBI UN-5aI -N/a aN5UWHIaB SUN-2Xa UU5 Ua 5ea - U5 SHIa2paB
-5aB5H- 3 VBI aBUN- N aBHXI UXBaN5 - W ea UNB VB 35 Ba a2a aN5WX5ea BH35
W3e -W5ea 2 Na H2 H MH HNa35B-N H5H -N HN HNa35B1Ua2NaW U2
/ pa NUg aVaN WpaB2HI SUNWX3Hpa UN -N IUBU SUN 4, R -5aB ea UNW5 SUN-2
-BN a aN5Wapa2HlaI Ue H5eaB -5aB-/aNBlaw / 5ea 4apaN - W 33HB HB5ea
W55a aN5-/Ba aN5 Ue 5ea HNWp-SUN U5B35 5eaN-2H NUg aVaN5H - a W HX
5eaW X3U5aWUN- - 5e-5 - U UaW5ea aNaX5WXH 5ea -5aB 1HBIaI 4 3e HlaB SUN-2
Xa UU5 UN-N5eaBWUN3-N5 aNaX5HX5ea BH35XB5ea 1 23

HlaB 5pa g -5aB -N/a aN5

, N WU 2a -5aB-/aN3 3-NIpaBWX UW -5aBW112 1HBIaI -N WI-3elapa - Ba- WN- 2a
Ia/Ba HX -5aBW112 BaU U5 TXWpaB2 -5aB-/aNBlaw Ue IUXBaN -5aBW112
1HBIaI HW HUNXBaW5eH / e 5ea U23H2a35pa2 -3elapa - 3e / Ba-5aBIa / Ba HX -5aB
W112 BaU U5 5e-N-N WU 2a-/aN3 -5- 2H aBHPaB 23HW5H5ea 1 23

ea BH35UN2 IaWUNW5 SUN-2-BN a aN5W5e-5-2H NUg aVaN5H3HlaB 5a UN -5aB
-N/a aN5aXBW Ue pU5 -22 -2HX5ea -5aBI pa HBUN5eaUBBaWa35pa WpUa -Ba-W
ea Na5BaW5HX5eaW 3HlaB 5pa aXBW U2 a U 1HBIaI -5aBW112 BaU U5 -N BI 3aI

MN UN WESTR XB4-N5 , N RpaBg -5aBRUe5, 1123-SUNW
-Be

3H5WXB -5aBW112 UNB VB 35 Ba Hfe HX5eaW aX35WX5ea BHa35-Ba U 1H5-N5 aNaX5W
XB5ea 1 23

5UN g -5aB5H aNaX3U2 W

ea -2XBNU HNW5 SUN -N-5aW5e-55ea -5aB5aW BaWX5ea 45-5a WH 2 a 1 5SH
aNaX3U2 W 5H5ea X2aW5a 5aN5HX eUe 5ea -Ba 3-1- 2a HWHX5ea -5aB5e-5

NUG aV5aBN1BH HW 5HI 5paB5UW -5aB5e-5 H 2 H5eaB UW N5 a 12-3aI 5H aNaX3U2 W
a3- W 5HB3 BW BN a5 a-BWHI BN W5B apaN5W ea 3-15 Ba HXW3e -5aBUW-N
U 1H5-N5-11U5UN5H NUG aV5aBN W -5aBW112 1H5X2H -N W1B5UaW-NU 1H5-N5
aNaX55H5ea 1 23

T 1Bpal g -5aB -25

ea -25 HX -5aBUN5ea 4-N5 , N R5paBUW5 1U-2 Ua/HI -N UW 3e a55aB5e-NH5eaB
W BaWX -5aB-p-U 2a 5H NUG aV5aBNHBH5eaB -5aB1 5pa HBWN5ea TN2-N S 1Ua ea
BHa35 U2-2H XIBUNBa-WI I 5paBWNW5H 5ea 4-N5 , N R5paB-N WI-2H XBU 1Bpal
-5aB -25 aU5eaBI Ua35 HB a-NWX 2aNUN UN -5aBWpal 5H5ea 1 23 -5aB
1 5pa HBW Ua35 Wpal NUG aV5aBN T 1Bpal -5aB -25 UW-NU 1H5-N51 23
aNaX5

D. Conclusion

-pUN BaI 3aI 5ea aX35WX5ea BHa35 -IHI5UN -2Xa-WU2a U5U-SUN a-WBaW-N
-2N5aI 5ea aNaX5WX5ea BHa35-/-UNW5ea BHa35WH5aN5U2 N-pHU- 2a -IpaB5 U 1-35W
5ea NUG aV5aBN H-B WX Ua35HB5eaBa I a5aB UNa 5e-55ea Wa3U3 HpaBBUN a3HNH U
2a/-2 WB5U2 5a3eNH5 U-2 HBH5eaB aNaX5WX5ea BHa35H 5 aUe 5ea 1H5aN5U2 N-pHU- 2a
-IpaB5 aX35WX5ea BHa35HN5ea aNpU5N aN5

Attachments

, U5U-SUN HNSHN -N Ra1H5UN 2-N

4 -B HXRaW BaW-N aH B1eU , Ba-W X35aI Hfe
5ea BHa35-N Ra2-5aI BHa35W B5S5TR - 2a

Attachment A: Mitigation Monitoring and Reporting Plan

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<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
Surface Water Hydrology and Water Quality				
<p>MM SW-1: Because anaerobic conditions are a problem associated with current operations at Seven Oaks Dam, it is anticipated that the operators of the dam (San Bernardino, Riverside, and Orange County Flood Control Districts, known as the 'Local Sponsors') will implement a program (such as water quality monitoring and aeration) to avoid and reverse anaerobic conditions so that water quality objectives are not exceeded. In those years when the Project results in seasonal water conservation storage behind Seven Oaks Dam, Muni/Western will participate in such a preventative program and provide funding, proportional to the volume of seasonal water conservation storage behind Seven Oaks Dam. (Draft EIR page 3.1-35)</p>	<p>The maintenance of water quality standards for water stored in Seven Oaks Reservoir is the responsibility of the Local Sponsors. Muni/Western will contribute, on a proportional basis, to measures designed to accomplish this goal.</p>	<p>During seasonal water conservation storage</p>	<p>Program description and compliance report to Muni/Western Boards</p>	<p>Annual during years when seasonal storage occurs.</p>
<p>MM SW-2: An energy dissipation structure, a device to slow fast moving flows so as to prevent erosion, will be placed at the terminus of the pipeline delivering water to the Lytle Basins channel to ensure that water from the Project does not scour or erode the channel. (Draft EIR page 3.1-36)</p>	<p>Muni/Western</p>	<p>Project operations</p>	<p>Compliance report to Muni/Western Boards</p>	<p>Before use of Lytle Basins channel</p>
Groundwater Hydrology and Water Quality				
<p>MM GW-1: Using available reliable data, Muni/Western will, on an annual basis, evaluate impacts of the Project on TDS concentrations in the SBBA. To the extent feasible given existing infrastructure, and consistent with meeting other basin management objectives, Muni/Western will direct Project water spreading to reduce significant TDS impacts. (Draft EIR page 3.2-29)</p>	<p>Muni/Western</p>	<p>Throughout project operations</p>	<p>Impact report to Muni/Western Boards</p>	<p>Annually</p>

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MM GW- 2: Using available data, Muni/Western will, on an annual basis, evaluate impacts of the Project on nitrate concentrations in the SBBA. To the extent feasible given existing infrastructure, and consistent with meeting other basin management objectives, Muni Western will direct Project water spreading to reduce significant nitrate impacts. (Draft EIR page 3.2-31; Final EIR page 3-57)	Muni/Western	Throughout project operations	Impact report to Muni/Western Boards	Annually
Biological Resources				
MM BIO-1: Muni/Western will minimize disturbance to native habitats and listed and non-listed sensitive species by the implementation of the following measures at construction sites prior to and during construction. Where ground disturbance is required, the Muni/Western program will include the following:	Muni/Western	Construction	Construction report to Muni/Western Boards and to MSHMP Committee	Annually from initiation to completion of construction
MM BIO-1 (cont.) <i>Restricting Disturbance</i> Restriction of staging, construction activities, equipment storage, and personnel to existing disturbed areas (such as roads, pads, or otherwise disturbed areas) to the maximum extent feasible.	Muni/Western	Construction	Construction plans showing limited construction areas, including existing disturbed areas, construction corridors, and biologically sensitive areas, to Muni/Western Boards and to MSHMP Committee	Prior to construction

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Biological Resources (continued)				
<p>MM BIO-1 (cont.)</p> <p>Clearly marking and delineating the limits of the staging areas as well as the construction corridors/ zones in the field and graphically on all final construction drawings or blueprints. Personnel and equipment will be prohibited in native habitats outside the construction limits.</p>	Muni/Western	Construction	Construction plans showing limited construction areas, including existing disturbed areas, construction corridors, and biologically sensitive areas, to Muni/Western Boards and to MSHMP Committee	Prior to construction
<p>MM BIO-1 (cont.)</p> <p>Biologically sensitive areas, including individuals or colonies of listed and non-listed sensitive plant species and wildlife species, will be identified and delineated in the field prior to ground disturbance (see MM BIO-3) and will be clearly marked graphically on all final construction plans or blueprints so they will be avoided to the maximum extent feasible.</p>	Muni/Western	Construction	Construction plans showing limited construction areas, including existing disturbed areas, construction corridors, and biologically sensitive areas, to Muni/Western Boards and to MSHMP Committee	Prior to construction

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<p>MM BIO-1 (cont.)</p> <p>Use methods to minimize the construction corridor width to the maximum extent feasible in sensitive habitats, such as transporting and stockpiling excavated materials in disturbed areas off the right-of-way (ROW), or into other parts of the ROW, by truck or conveyor belt.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly
<p>MM BIO-1 (cont.)</p> <p><i>Employee Training</i></p> <p>Implementation of an employee training program. Muni/Western’s program will include an initial meeting with all personnel presented by a qualified biologist familiar with all affected species, habitats, and permit conditions. The employee training program will include a discussion of each species, all applicable laws, the permit conditions, and the potential penalties for violating permit conditions. The employee training program will be conducted before construction activities begin. Regular updates will occur during weekly tailgate meetings with construction personnel, and newly hired personnel will be informed of the permit conditions as well as the habitat and species issues before working on the Project site.</p>	Muni/Western	Construction	Training program syllabus and training sign-in sheets to Muni/Western Boards and to MSHMP Committee	Annually from initiation to completion of construction

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<p>MM BIO-1 (cont.)</p> <p><i>On-Site Monitoring</i></p> <p>Biological monitoring of habitat clearing activities and removal of sedentary animals, both common and sensitive, within the ROW prior to clearing. This will require a qualified biologist to be at the location of habitat removal before clearing to attempt to remove animals where visible and, during removal activities, to ensure that no inadvertent impacts to adjacent habitats occur. Weekly inspections of the ROW perimeter near work areas will also reduce the potential for inadvertent impacts to adjacent habitat.</p>	Muni/Western	Construction	Monitoring report to Muni/Western Boards and to MSHMP Committee	Monthly
Biological Resources (continued)				
<p>MM BIO-1 (cont.)</p> <p><i>Best Management Practices (BMPs)</i></p> <p>Dust control. All areas of mechanical ground disturbance, including dirt access roadways, will be consistently moistened to reduce the creation of dust clouds. The frequency of watering will be consistent with the desired goal and in accordance with regional standards and BMPs.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly
<p>MM BIO-1 (cont.)</p> <p>Erosion control. Devices such as straw bales and “v” ditches will be installed in areas where construction activities may directly or indirectly cause increased erosion or sediment deposition on adjacent habitats.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly

Attachment A: Mitigation Monitoring and Reporting Plan

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<p>MM BIO-1 (cont.)</p> <p>Routine removal of trash from construction areas. All refuse, including non-construction materials such as paper and miscellaneous food packaging materials, will be removed from the ROW to prevent littering of the adjacent habitat areas outside of the ROW. At a minimum, site clean-ups should occur weekly.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly
<p>MM BIO-1 (cont.)</p> <p><i>Listed Species Protection Measures</i></p> <p>In areas where the SBKR is present, either within or adjacent to the ROW, Muni/Western will install exclusionary fencing where appropriate to reduce the potential for SBKR entering the ROW. Specifications for the fencing will be particular to the goal of SBKR exclusion and will be approved by the USFWS. Muni/Western may not install fencing in certain areas such as boulder-strewn washes where fence construction may cause substantial habitat disturbance. Following the installation of fencing, the animals within the ROW will be trapped and released within adjacent suitable habitat outside the ROW. These methods will be approved by the USFWS.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Before initiation of construction, then monthly throughout construction

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<p>MM BIO-1 (cont.)</p> <p>In areas where the SBKR is present, either within or adjacent to the ROW, Muni/Western will limit construction activities to daylight hours (approximately 7:00 A.M. to 6:00 P.M.). During night hours, no activities that would unnaturally increase the light or noise within adjacent occupied habitat will occur.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly
Biological Resources (continued)				
<p>MM BIO-1 (cont.)</p> <p>In areas where the SBKR, CAGN, least Bell’s vireo, or southwestern willow flycatcher are present, either within or adjacent to the ROW, Muni/Western will avoid or reduce construction activities in the vicinity of occupied habitat during the breeding season. Avoidance will take place from March 1 through June 30. In certain areas, avoidance of southwestern willow flycatcher will continue through July 31. Where complete avoidance is not possible, construction activities will be conducted in a manner that attempts to minimize disturbance during early morning hours and avoids the most sensitive breeding months of April and May.</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly

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<p>MM BIO-1 (cont.)</p> <p>In areas where preconstruction sensitive species surveys and other seasonally limited activities such as seed collection and plant propagation are needed, Muni/Western will prepare a calendar of when such activities need to be accomplished and incorporate this into design and construction schedules to ensure that the surveys can be conducted in the appropriate season without causing delays. (Draft EIR page 3.3-37 through 3.3-39; Final EIR Section 2.4)</p>	Muni/Western	Construction	Compliance report, including calendar of preconstruction survey activities, to Muni/Western Boards and to MSHMP Committee	Before initiation of construction, then monthly throughout construction

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Biological Resources (continued)				
<p>MM BIO-2: Muni/Western will develop a Habitat Revegetation, Restoration, and Monitoring Program (Program), obtaining input from CDFG and USFWS, for implementation in all habitat areas directly affected by construction activities. The Program will include the following measures:</p> <p><i>Invasive Species Control</i></p> <ul style="list-style-type: none"> • Where appropriate and feasible, the area to be disturbed will be treated to kill invasive exotics species and limit their seed production before initiating any earthmoving activity with the objectives of (1) preventing invasive species from spreading from the disturbance area, and (2) removing weed sources from the salvaged topsoil. Herbicides will be used only by a licensed herbicide applicator and may require notification to property owners or resource agencies. The treatment will be completed before earthmoving in order for this mitigation to have its intended effect (e.g., the treatment would need to occur before target species set seed). 	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Before initiation of construction activities

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Biological Resources (continued)				
<p>MM BIO-2 (cont.)</p> <p><i>Topsoil Salvage and Replacement</i></p> <ul style="list-style-type: none"> In areas where vegetation and soil are to be removed, the topsoil will be salvaged and replaced, where practicable. This may be accomplished using two lifts, the first to salvage the seed bank, and the second to salvage soil along with soil biota in the root zone. Soil will be stockpiled in two areas near the Project site, with the seed bank labeled to identify it. Topsoil will be replaced in the proper layers after final reconfiguration of disturbed areas. Where presence of extensive deposits of boulders and cobbles limit the opportunity to salvage topsoil and make the above-mentioned procedure infeasible, Muni/Western will salvage available surface material and stockpile it for replacement on the surface of the restored area. Stockpiles will be covered if the soil is to be left for an extended period to prevent losses due to erosion and invasion of weeds. 	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Monthly

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<p>MM BIO-2 (cont.)</p> <p><i>Habitat Rehabilitation and Revegetation</i></p> <ul style="list-style-type: none"> Muni/Western will develop and implement plans and specifications for replanting areas disturbed by the Project. Replanting will be with native species propagated from locally collected seed or cuttings, and, if applicable, will include seed of sensitive species that would be impacted during construction activities. 	Muni/Western	Construction, post-construction	Written plan for replanting areas disturbed by the Project, to Muni/Western Boards and to MSHMP Committee	By completion of construction
Biological Resources (continued)				
<p>MM BIO-2 (cont.)</p> <p>Monitoring procedures and performance criteria will be developed by Muni/Western to address revegetation and erosion control. The performance criteria will consider the level of disturbance and the condition of adjacent habitats. Monitoring will continue for 3-5 years, or until performance criteria have been met. Appropriate remedial measures, such as replanting, erosion control or weed control, will be identified and implemented if it is determined that performance criteria are not being met. (Draft EIR page 3.3-39 through 3.3-40; Final EIR Section 2.4)</p>	Muni/Western	Construction, post-construction	Written plan for monitoring procedures and monitoring reports to Muni/Western Boards and to MSHMP Committee	By completion of construction (written plan); monthly (monitoring reports) until performance criteria have been met

Attachment A: Mitigation Monitoring and Reporting Plan

<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
<p>MM BIO-3: Before ground disturbance or other activities, qualified botanists and wildlife biologists will survey all proposed construction, staging, stockpile, and access areas for presence of state-or federally-listed plant or wildlife species. Preconstruction surveys will occur during the appropriate season and in accordance with established protocols (if required). These surveys will be conducted in all construction areas that occur in riparian, RAFSS, RSS, chaparral, or other native habitats. These surveys are for the purpose of documenting their locations relative to the construction areas and avoidance where feasible.</p>	Muni/Western	Pre-Construction	Biological survey to Muni/Western Boards and to MSHMP Committee	Before initiation of construction activities
Biological Resources (continued)				
<p>MM BIO-3 (cont.)</p> <p>Colonies of state- or federally-listed plants will be clearly marked, mapped, and recorded along with the numbers of individuals in each colony and their respective condition. Locations of listed animal species will also be marked, mapped, and recorded. To the maximum extent feasible, construction areas and access roads will be adjusted to avoid loss of individual listed plants and animals and damage to habitats supporting these species. Individuals of listed wildlife species in the ROW, other than birds and other mobile species, will be captured if possible by biologists with the appropriate permits and relocated to suitable habitat outside the ROW. (Draft EIR page 3.3-40)</p>				

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<p>MM BIO-4: Where impacts to listed plant species are unavoidable, Muni/Western will develop and implement, together with the listing agency, a salvage, propagation, replanting, and monitoring program that would utilize both seed and salvaged plants constituting a representative sample of each colony of the species that would be affected. The program will include measures to perpetuate the genetic lines represented to the maximum extent feasible. The program will be approved by the appropriate resource protection agencies prior to its implementation. Activities involving handling of state- or federally- listed plant species may require permits as well as a memorandum of understanding from the USFWS or CDFG.</p>	Muni/Western	Construction	Program description to Muni/Western Boards and to MSHMP Committee	Before initiation of construction where feasible
Biological Resources (continued)				
<p>MM BIO-4 (cont.)</p> <p>The Muni/Western salvage, propagation, replanting, and monitoring program will incorporate provisions for recreating suitable habitat and measures for re-establishing self-sustaining colonies of listed plant species, should they be affected on the various project sites. The program will include provisions for monitoring and performance criteria, including an annual assessment of progress, and provisions for remedial action if performance criteria are not being met. (Draft EIR page 3.3-40)</p>				

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MM BIO-5: Prior to ground disturbance or other activities, qualified wildlife biologists will survey all proposed construction, staging, stockpile, and access areas for presence of non-listed sensitive wildlife species. Preconstruction surveys will take place during the appropriate season and in accordance with established protocols (if required). These surveys will be conducted in all construction areas that occur in native habitats. In the event that non-listed sensitive wildlife species are observed in the impact area during these pre-project surveys, Muni/Western will implement the following measures:	Muni/Western	Pre-Construction	Biological survey, map of sensitive species locations, and compliance report to Muni/Western Boards and to MSHMP Committee	Before initiation of construction activities (survey and map); annually (compliance report)
Biological Resources (continued)				
MM BIO-5 (cont.) <ul style="list-style-type: none"> • Locations of non-listed sensitive animals found during the surveys will also be marked, mapped, and recorded. Locations of burrowing animals will be avoided where feasible. • Individuals of non-listed sensitive wildlife species in the ROW, other than birds, will be captured and relocated to suitable habitat outside the ROW. • Where nesting of non-listed sensitive bird species is found to occur within the ROW, vegetation clearing will be conducted outside the nesting season. (Draft EIR page 3.3-41) 				

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<p>MM BIO-6: Prior to ground disturbance or other activities, qualified botanists will survey all proposed construction, staging, stockpile, and access areas for presence of non-listed sensitive plant species. Preconstruction surveys will occur during the appropriate season and in accordance with established protocols (if required). These surveys will be conducted in all construction areas that occur in native habitats. In the event that non-listed sensitive plant species are observed in the impact area during pre-Project surveys, Muni/Western will implement the following measures:</p>	Muni/Western	Pre-construction	Biological survey, map of sensitive species location, and monitoring program description to Muni/Western Boards and to MSHMP Committee	Before initiation of construction
Biological Resources (continued)				
<p>MM BIO-6 (cont.)</p> <p>(a) Colonies will be clearly marked, mapped, and recorded along with the numbers of individuals in each colony and their respective condition. To the extent feasible, construction areas and access roads will be configured to avoid or minimize loss of individual plants and damage to occupied habitats.</p> <p>(b) Where impacts to non-listed sensitive plant species are unavoidable, Muni/Western will develop and implement a salvage, propagation, replanting, and monitoring program that will use both seed and salvaged plants constituting an ample and representative sample of each colony. (Draft EIR page 3.3-42)</p>				

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<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
<p>MM BIO-7: To reduce impacts on biological resources, Muni/Western will realign pipelines to avoid sensitive resources and habitat to the maximum extent feasible. Specifically, Muni/Western will realign Phase II of the Plunge Pool Pipeline northward and place it adjacent to Greenspot Road (see Draft EIR Figure 3.3-7). This will put the Project-related disturbance at the edge of the habitat and avoid bisecting the intermediate to mature RAFSS habitat along the western portion of the alignment.</p> <p>If it is infeasible to implement MM BIO-7, then the residual impact could be compensated by implementation of MM BIO-8, which is intended to compensate for permanent or long-term losses of sensitive RAFSS habitat as a result of installation of permanent facilities or long-term construction impacts that cannot be fully mitigated by MM BIO-1, MM BIO-2, and MM BIO-7. (Draft EIR page 3.3-44)</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards and to MSHMP Committee	Before initiation of construction of Phase II of the Plunge Pool Pipeline

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Biological Resources (continued)				
<p>MM BIO-8: To compensate for permanent long-term and temporal losses of RAFSS habitat and RAFSS habitat value, Muni/Western will acquire, for every 1 acre impacted, a minimum of 1 acre of good quality habitat of similar or greater habitat value than the RAFSS area impacted by the Plunge Pool Pipeline and dedicate it in perpetuity as a habitat conservation easement area, or other appropriate designation, and provide funding for its future management as native habitat in perpetuity. The acquired RAFSS habitat area would ideally be contiguous with existing habitat already set aside in the WSPA or other dedicated RAFSS habitat. If good quality habitat in such a locality is not available for purchase, availability of other RAFSS habitat will be investigated, with the objective of obtaining good quality habitat near the Project area. Implementation of this mitigation measure will be subject to the requirement that such long-term mitigation and reporting plans for such acquisitions are to be approved by the Chief of the Division of Water Rights of the State Water Resources Control Board prior to the construction of the Plunge Pool Pipeline. (Draft EIR page 3.3-44; Final EIR Section 2.4)</p>	Muni/Western	Post-construction	Report on compensatory mitigation to Muni/Western Boards and to MSHMP Committee	Upon completion of construction of Plunge Pool Pipeline

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Biological Resources (continued)				
<p>MM BIO-9: Muni/Western will monitor and remove invasive non-native species establishing in the channel and adjacent RAFSS habitats between Seven Oaks Dam and Mill Creek. Target species include species of tamarisk or salt cedar (<i>Tamarix</i> spp.), fountain grass (<i>Pennisetum setaceum</i>), and giant reed (<i>Arundo donax</i>). These species establish in habitats suitable for SBKR and Santa Ana River woolly-star and have the potential to spread further into adjacent suitable habitat areas. Initial control will be established using a combination of physical removal and herbicidal treatment using appropriate environmental safeguards. Herbicides will be used pursuant to manufacturer’s instructions and standard measures will be taken to avoid impacts to water quality. Two to several follow-up treatments would be anticipated during the first year with follow-up monitoring and treatments at least once annually in ensuing years. (Draft EIR page 3.3-61; Final EIR Section 2.4)</p>	Muni/Western	Project operations	Monitoring reports to Muni/Western Boards and to MSHMP Committee	Monthly during first year after completion of construction; then annually
<p>MM BIO-10: Muni/Western will develop a program, in coordination with MSHMP agency participants, to selectively restore SBKR and Santa Ana River woolly-star habitat by using habitat manipulation, either by mechanical means or high pressure water, to remove vegetation and leave freshly deposited sand and silt, simulating the habitat-renewing aftermath of natural flooding. This will be done using an adaptive management approach with input from MSHCP stakeholders. If the high pressure water method is used, water will be piped</p>	Muni/Western	Project operations	Program description and monitoring reports to Muni/Western Boards and to MSHMP Committee	By completion of construction activities (program description); annually (monitoring reports)

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by Muni/Western to areas of suitable habitat.				
Biological Resources (continued)				
<p>MM BIO-10 (cont.)</p> <p>A high-pressure nozzle will be directed at localized areas of habitat determined to be suitable for SBKR and Santa Ana River woolly-star after renewal. The nozzle will be hand-operated or operated from a light vehicle. Treatments will be accomplished in a randomized block design to allow experimental testing of variables such as duration and intensity of spray, addition of clean sand, season of disturbance, application of seed vs. allowing natural dispersal, etc. A rigorous monitoring program funded by Muni/Western will be established to enable the differences among experimental treatments to be determined. The primary indicator of success will be related to development of habitat characteristics identified with pioneer to intermediate RAFSS habitat within which SBKR and Santa Ana River woolly-star populations have been documented. These characteristics are documented in the literature and will be specified as part of the Muni/Western program. The program will be adjusted appropriately as results from earlier efforts become available. The design and implementation of the ongoing effort will be funded by Muni/Western and conducted by representatives of Muni/Western with input from the USFWS and CDFG. A complete description of this method is also included in Appendix E7 of the Draft EIR, Section 2.0. Muni/Western commit to achieving a mitigation performance standard of restoring 10 acres of intermediate- to late-stage RAFSS habitat to</p>				

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the early or intermediate stage RAFSS habitat during the first twenty years of Project implementation. (Draft EIR pages 3.3-61 and 3.3-62; Final EIR Section 2.4)				
Geology, Soils, and Mineral Resources				
MM GEO-1: Before beginning construction, a sedimentation and erosion control plan will be prepared by Muni/Western and submitted to the SARWQCB for approval. In addition, a Storm Water Pollution Prevention Plan (SWPPP) will be prepared by Muni/Western and submitted to the SARWQCB for approval prior to construction. Where possible, erosion control measures will be implemented by Muni/Western before beginning work in the rainy season. To minimize short-term impacts associated with erosion and off-site siltation of the SAR, standard erosion and sediment control features will be used during and immediately after grading and excavations. <u>A SWPPP is a requirement of the General Construction Stormwater NPDES Permit.</u> (Draft EIR page 3.4-18; Final EIR page 3-171)	Muni/Western	Pre-construction	Sediment and erosion control plan, SWPPP to Muni/Western Boards and to SARWOCB (SWPPP only)	Before initiation of construction

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MM GEO-2: Muni/Western will direct the contractor to install, prior to de-watering activities, energy dissipation devices at discharge points to prevent erosion. Sedimentation basins (such as straw bales lined with filter fabric) will be used at dewatering discharge points to prevent excess downstream sedimentation. These basins will be constructed before dewatering and regularly maintained during construction, including after storm events, to keep them in good working order. A monitor will verify effective operation of energy dissipation features during dewatering. (Draft EIR page 3.4-19; Final EIR page 3-171)	Muni/Western	Construction	Compliance report and maintenance reports to Muni/Western Boards	Monthly

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Geology, Soils, and Mineral Resources (continued)				
<p>MM GEO-3: Muni/Western will implement recommendations established in a site-specific geotechnical report, prepared by a qualified geotechnical engineer or engineering geologist. The report recommendations will be based on a comprehensive evaluation of slope stability, seismic, and soil conditions that may affect construction of the pipelines and related facilities. Recommendations will be consistent with provisions of California Code of Regulations, Title 8, Construction Safety Orders.</p> <p>Project grading and excavations will be observed by a geotechnical engineer, engineering geologist, or other qualified representative, to verify compliance with recommendations of the geotechnical report.</p> <p>The geotechnical investigation will be completed in accordance with:</p> <ul style="list-style-type: none"> • CDMG Special Publication 117, <i>Guidelines for Evaluating and Mitigating Seismic Hazards in California</i> (CDMG 1997); and • Southern California Earthquake Center, <i>Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California</i> (SCEC 1999). (Draft EIR page 3.4-20) 	Muni/Western	Construction	Copy of geotechnical report to Muni/Western Boards	Before initiation of construction

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Geology, Soils, and Mineral Resources (continued)				
MM GEO-4: Muni/Western will implement seismic-related recommendations contained in a site-specific geotechnical report, as discussed in MM GEO-3, to minimize seismically induced damage to the pipeline. (Draft EIR page 3.4-22)	Muni/Western	Construction	Compliance report to Muni/Western Boards	Upon completion of recommendations in geotechnical report
MM GEO-5: A water flow shut-off mechanism will be installed by Muni/Western at the Plunge Pool Pipeline Intake Structure to terminate flow following a large earthquake in the vicinity of the site. (Draft EIR page 3.4-22)	Muni/Western	Construction	Compliance report to Muni/Western Boards	Upon completion of installation
MM GEO-6: Muni/Western will complete emergency repairs to the pipeline and/or related facilities, in the event of seismically induced damage. MM-GEO-1 and MM GEO-2 will be applied to reduce erosion-related impacts associated with soil disturbance during emergency repairs. (Draft EIR pages 3.4-22 through 3.4-23)	Muni/Western	In the event of seismically induced damage	Compliance report to Muni/Western Boards	Upon completion of emergency repairs

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<p>MM GEO-7: Muni/Western will implement a groundwater level monitoring program using data from Index Wells. This information will be used in conjunction with forecasts of groundwater levels derived from the Muni/Western integrated surface and groundwater models to identify trends in groundwater levels and identify changes directly attributable to the Project. To the extent feasible given existing infrastructure, and consistent with meeting other basin management objectives, Muni/Western will direct Project water spreading to limit high groundwater conditions (groundwater within 50 feet of ground surface) in the vicinity of Devil Canyon, Lytle Creek, Mill Creek, and areas in the forebay and intermediate area of the SBBA. (Draft EIR pages 3.4-28)</p>	Muni/Western	Operations	Groundwater monitoring program description and reports on groundwater levels to Muni/Western Boards	By completion of construction (program description); annually (reports)
Geology, Soils, and Mineral Resources (continued)				
<p>MM GEO-8: Muni/Western will implement a groundwater level monitoring program using data from Index Wells (see Draft EIR Figure 3.4-5). This information will be used, in conjunction with forecasts of groundwater levels derived from Muni/Western integrated surface and groundwater models, to identify trends in groundwater levels and isolate changes attributable to the Project. To the extent feasible given existing infrastructure, and consistent with meeting other basin management objectives, Muni/Western will direct Project water spreading to limit the potential for subsidence in the Pressure Zone area of the SBBA. (Draft EIR page 3.4-29)</p>	Muni/Western	Operations	Groundwater monitoring program description and reports on groundwater levels to Muni/Western Boards	By completion of construction (program description); annually (reports)
Air Quality				

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MM AQ-1: Muni/Western will encourage the contractor to use emulsified diesel fuel in construction equipment, where feasible. Use of this alternative diesel fuel would reduce NOx and PM emissions by 14 and 62.9 percent, respectively, from conventional diesel (Draft EIR page 3.8-12).	Muni/Western	Construction	Compliance report to Muni/Western Boards	Annually
MM AQ-2: Muni/Western will encourage the contractor to use the newest diesel-powered equipment available. (Draft EIR page 3.8-12)	Muni/Western	Construction	Compliance report to Muni/Western Boards	Annually
Cultural Resources				
MM CR-1: In the event of an unanticipated archaeological or paleontological resource discovery during construction, all ground disturbances within 150 feet of the discovery will be halted or redirected to other areas until the discovery has been documented by a qualified archaeologist or paleontologist, and its potential significance evaluated consistent with CEQA. Resources considered significant will be avoided by Project redesign. If avoidance is not feasible, the resource will be subject to a data recovery mitigation program, as appropriate. If human remains are discovered, the County Coroner will be contacted, and all procedures required by the California Health and Safety Code Section 7050.5, State CEQA Guidelines Section 15064.5(e), and PRC Section 5097.98 will be followed. (Draft EIR page 3.9-19)	Muni/Western	Construction	Compliance report to Muni/Western Boards	Within 30 days of discovery or archaeological or paleontological resource

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MM CR-2: Proposed construction of the Plunge Pool Pipeline will avoid physical impacts to the Francis Cuttle Weir Dam to the extent feasible. In the event that any portion of the Francis Cuttle Weir Dam would be modified or demolished, a qualified architectural historian will prepare a historic recordation of the Francis Cuttle Weir Dam, in the context of the Conservation District’s groundwater spreading system. The recordation will conform to the standards of either the Historic American Buildings Survey (HABS) or the Historic American Engineering Record (HAER). (Draft EIR page 3.9-20)	Muni/Western	Construction	Compliance report to Muni/Western Boards; historic recordation report (if necessary)	Annually
Cultural Resources (continued)				
MM CR-3: Prior to construction activities along the segment of the Plunge Pool Pipeline, Phase I, aligned north of Greenspot Road, the location of the North Fork Canal will be precisely mapped on engineering design plans to identify where the canal falls within the construction corridor. Temporary fencing will be placed 5 feet south of the canal along the portion of the canal that falls within the construction corridor to provide a small buffer area, and no heavy construction equipment or vehicles will be allowed north of the fencing. (Draft EIR page 3.9-21)	Muni/Western	Construction	Engineering design plans with map of North Fork Canal and compliance report to Muni/Western Boards	Before construction of the Plunge Pool Pipeline

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MM CR-4: If it is necessary to install the Morton Canyon Connector II Pipeline through the "Hole in the Wall" within the retaining wall of Greenspot Bridge, construction activities will be confined to previously disturbed sections only and the wall will be restored to pre-Project conditions. Prior to construction, a qualified architectural historian will review the final construction designs of the Morton Canyon Connector II Pipeline to verify avoidance of significant impacts to any Greenspot Bridge feature. (Draft EIR page 3.9-24)	Muni/Western	Construction	Historian review report and compliance report to Muni/Western Boards	Before construction of the Morton Canyon Connector II Pipeline (historian report); after construction (compliance report)

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Noise				
<p>MM NOI-1: A construction noise monitor, identified by the Project proponents, will be responsible for overseeing the contractor's implementation of the noise mitigation measures. The monitor will also be the point of contact for noise complaints.</p> <p>Construction will occur only from Monday through Friday between 7 am and 7 pm. No construction will occur on weekends or holidays.</p> <p>Noise-generating construction equipment will be less than 10 years old or, if older, will not generate higher noise levels than new low-noise generating models. Documentation will be provided by the contractor.</p> <p>Construction equipment will be accessorized with the manufacturers' recommended noise attenuation devices, such as sound mufflers or self-adjusting backup alarms, and be appropriately maintained.</p> <p>In noise sensitive areas, temporary noise barriers will be located around high noise-generating equipment.</p> <p>Placement of construction equipment during times of operation will take into account the location of noise sensitive receptors.</p> <p>Where noise levels are expected to be high, advanced warning in writing will be given to residents in the vicinity of construction activities indicating the expected duration of the activities. (Draft EIR page 3.10-6)</p>	Muni/Western	Construction	Noise monitor report to Muni/Western Boards	Monthly

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Hazardous Materials and Groundwater Contamination				
MM HAZ-1: Muni/Western will direct the contractor to wash out concrete trucks in a designated area where the material cannot run off into a stream or percolate into the groundwater. This area will be specified on all applicable construction plans and be in place before any concrete is poured. Muni/Western will direct the contractor to service construction vehicles in a manner that contains fluids, such as lubricants, within an impervious area to avoid spill-related water quality impacts. (Draft EIR page 3.12-12)	Muni/Western	Construction	Copy of construction plans; compliance report to Muni/Western Boards	Before initiation of construction (plans); monthly (compliance report)
MM HAZ-2: Muni/Western will direct the contractor to inspect and, as necessary, service all equipment before it enters the construction site and regularly thereafter, and before working immediately adjacent to the SAR or any other drainage or creek to avoid equipment leak-related water quality impacts. Muni/Western will direct the contractor to repair any leaks or hoses/fittings in poor condition before the equipment begins work. (Draft EIR page 3.12-12)	Muni/Western	Construction	Compliance report to Muni/Western Boards	Monthly throughout construction

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Hazardous Materials and Groundwater Contamination (continued)				
<p>MM HAZ-3: Muni/Western will direct the contractor to prepare a spill prevention and containment plan prior to equipment use on the site. Muni/Western will direct the contractor to follow the spill prevention plan during Project construction to prevent spill-related water quality impacts. This plan will include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> a. Specific bermed equipment maintenance and refueling areas. b. Bermed and lined hazardous material storage areas on site that are covered during the rainy season. c. Hazardous material spill cleanup equipment on site (e.g., absorbent pads, shovels, and bags to contain contaminated soil). d. Workers trained in the location and use of cleanup equipment. (Draft EIR page 3.12-12) 	Muni/Western	Construction	Spill prevention and containment plan to Muni/Western Boards	Before initiation of construction for each construction area
<p>MM HAZ-4: Using available data, in conjunction with the integrated surface and groundwater models, Muni/Western will identify groundwater trends, including plume movement and isolate changes attributable to implementation of the Project. To the extent feasible given existing infrastructure, and consistent with meeting other basin management objectives, Muni/Western will direct Project water spreading to limit adverse plume movements. (Draft EIR page 3.12-14)</p>	Muni/Western	Operations	Report on groundwater trends and any spreading to limit plume movement to Muni/Western Boards	Annually

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Hazardous Materials and Groundwater Contamination (continued)				
MM HAZ-5: Muni/Western will make an alternative water supply available to parties affected by contaminated wells, or provide treatment for affected wells, at Muni/Western’s discretion. The alternative supply or treatment for affected wells will be made available for all times when pertinent water quality standards are exceeded as a result of the Project. (Final EIR section 2.3.2).	Muni/Western	Throughout project operations	Report to Muni./Western Boards	In the event this mitigation measure is triggered, a report must be submitted within 30 days and monthly thereafter
MM HAZ-6: Muni/Western shall not spread water diverted or stored pursuant to the Project in the Cactus Spreading and Flood Control Basins or other locations overlying the Rialto/Colton basin until Muni/Western have completed the development of a groundwater model of the Rialto/Colton basin that includes in its model output estimates of the impacts of the Project on groundwater contaminants. In the event that the model shows that the Project will cause the contamination of any well used to provide a source of potable water, Muni/Western will comply with the terms of MM-HAZ- 5 by providing an alternative source of potable water or treatment of affected wells during the period where the Project contributes to an exceedance of applicable water quality objectives. (Final EIR section 2.3.2)	Muni/Western	Operations	Description of model estimating Project impacts and impact reports	Upon availability of model (description); annually after model is available (reports)

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Public Services, Utilities, and Transportation				
MM PS-1: During construction, Muni/Western will arrange to use facilities of the Santa Ana River-Mill Creek Cooperative Water Project Agreement to make deliveries to local users that would otherwise receive water from the Plunge Pool By-Pass Pipeline. If exchange cannot replace disrupted delivery, Muni/Western will furnish SWP water as a replacement supply. (Draft EIR page 3.13-14)	Muni/Western	Construction	Agreement for use of Santa Ana River-Mill Creek Cooperative Water Project to Muni/Western Boards	Before initiation of construction
MM PS-2: During construction, Muni/Western will arrange to use facilities of the Santa Ana River-Mill Creek Cooperative Water Project Agreement to make deliveries to users that would otherwise receive water via the SCE River Crossing/North Fork Canal. The affected sections of the SCE River Crossing/North Fork canal shall be replaced in-kind after construction. If exchange cannot replace disrupted delivery, Muni/Western will furnish SWP water as replacement supply. (Draft EIR page 3.13-14)	Muni/Western	Construction	Agreement for use of Santa Ana River-Mill Creek Cooperative Water Project to Muni/Western Boards	Before initiation of construction
MM PS-3: Deliveries that would have occurred to the Santa Ana River spreading grounds via the Conservation District Canal will instead occur via existing Muni facilities. After construction, the affected sections of the canal will be replaced with an in-kind structure. (Draft EIR page 3.13-15)	Muni/Western	Construction	Compliance report	Monthly until end of construction

Attachment A: Mitigation Monitoring and Reporting Plan

<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
Public Services, Utilities, and Transportation (continued)				
<p>MM PS-4: Part of the Phase I Plunge Pool Pipeline could be replaced by a tunnel, and the length of the Phase III Plunge Pool Pipeline could be shortened. As shown in Draft EIR Figure 3.13-1, under this mitigation measure a tunnel would be built from a point just south and west of Cuttle Weir. The tunnel would extend southwesterly through the mountains for approximately 1,600 feet. At the base of the mountains, the tunnel would transition to an underground pipeline which would extend for approximately 2,250 feet before hooking up to a valve structure at the Foothill Pipeline terminus. Under this mitigation measure, the designed conveyance capacity would be 1,500 cfs, though the operating capacity would be limited to 500 cfs until Phase II of the Plunge Pool Pipeline was completed.</p> <p>In total, with this mitigation measure, alignment of the Plunge Pool Pipeline Phase I would be approximately 3,850 feet. Due to the different location of the Phase I alignment, Phase III of the Plunge Pool Pipeline would also have to be somewhat modified. Per this mitigated alignment, Phase III of the Plunge Pool Pipeline would trend westward across a more northerly part of the SAR than would occur under the Project and, as a result, this new alignment of Phase III of the Plunge Pool Pipeline would be somewhat shorter, approximately 2,000 feet long, than under the Project (2,980 feet). The Low Flow Connector would remain as proposed by the Project, 3,500 feet long, though with the modifications to the Plunge Pool Pipeline, these two pipes would have a common trench for only about 1,350 feet, rather than 2,250 feet as would occur under the proposed Project.</p>	Muni/Western	Construction	Construction plans and Progress reports to Muni/Western Boards	Before initiation of construction (plans); monthly (progress reports)

Attachment A: Mitigation Monitoring and Reporting Plan

<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
Public Services, Utilities, and Transportation (continued)				
<p>MM PS-4 (cont.)</p> <p>With this mitigation measure, the 15-foot diameter Plunge Pool Pipeline would be inside an 18-foot horseshoe-shaped tunnel. The rock through which the tunnel would be constructed is highly fractured and the steel pipe would be surrounded with concrete backfill. The tunnel would be constructed using a drill and blast method and waste rock would be sent to nearby aggregate facilities. Construction activities would last up to a year with the drilling taking about 3 months and back-filling another 3 months. Construction would occur six days per week. The route underlies lands of the San Bernardino National Forest. (3.13-15 and 3.13-16)</p>				
<p>MM PS-5: Muni/Western will direct the contractor to have a qualified traffic engineer prepare and implement a traffic management plan that defines how traffic operations will be managed and maintained on roadways during each phase of construction including any detours, signage, lane closures, or utility relocation work. The traffic management plan will specify necessary lane closures, detours, any signage/lighting, flaggers, and other traffic control measures needed to avoid accidents and provide access to residents and emergency response vehicles during construction. (Draft EIR page 3.13-18)</p>	Muni/Western	Construction	Traffic management plan to Muni/Western Boards	Before construction of the Plunge Pool Pipeline, Phase II

Attachment A: Mitigation Monitoring and Reporting Plan

<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
Public Services, Utilities, and Transportation (continued)				
<p>MM PS-6: Muni/Western will direct the contractor to re-grade a pathway, a portion of which was formerly used as a road during the construction of Seven Oaks Dam. Upgrading the pathway could include repairing or replacing (with a like structure, culvert or temporary crossing) the existing bridging over the Conservation District canal. During Project construction in the Santa Ana River Construction Area, non-construction vehicles will be directed to this detour route; see Draft EIR Figure 3.13-2. This detour route will allow authorized vehicles to enter the Seven Oaks Dam access road at a point northeast of the road closure, allowing full access to the Seven Oaks Dam operations buildings, SCE SAR Powerhouse 2/3, and Seven Oaks Dam. Muni/Western will provide security at this detour road to prevent unauthorized access to the dam site. (Draft EIR page 3.13-19 and Final EIR Chapter 3).</p>	Muni/Western	Construction	Compliance report to Muni/Western Boards	Monthly
<p>MM PS-7: During construction, Muni/Western will direct non-construction vehicles that need to access Seven Oaks Dam and Reservoir, an alternate access to Seven Oaks Dam; see Draft EIR Figure 3.13-2. This detour route will allow authorized vehicles to enter the dam site at the right abutment of Seven Oaks Dam. Muni/Western will provide security at this alternate access road during construction of the Phase III Plunge Pool Pipeline and Low Flow Connector to prevent unauthorized access to the dam site. (Draft EIR page 3.13-21)</p>	Muni/Western	Construction	Map of alternate access routes and compliance report to Muni/Western Boards	Before initiation of construction (map); monthly (compliance report)

Attachment A: Mitigation Monitoring and Reporting Plan

<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
MM PS-8: All construction contractors will provide weekly updates regarding construction schedules and road closures to local police and fire jurisdictions. (Draft EIR page 3.13-27)	Construction contractors	Construction	Update regarding construction schedules to local police and fire jurisdictions	Weekly
Public Services, Utilities, and Transportation (continued)				
MM PS-9: All construction contractors will notify all residents in the construction area a minimum of 1 week before beginning construction. (Draft EIR page 3.13-27)	Construction contractors	Pre-construction	Notice to residents	One week before beginning construction
MM PS-10: All construction contractors will coordinate construction activities with local emergency services (police, fire, paramedic), the U.S. Postal Service, school bus and Omnitrans operators, delivery services, and local refuse companies to ensure continuity of these services. (Draft EIR page 3.13-27)	Construction contractors	Construction	Notice and coordination with local emergency services	Before initiation of construction
MM PS-11: All construction contractors will post warning signs and construct barriers to prevent pedestrians from inadvertently entering construction areas or falling into open trenches. Contractors will also ensure that Project construction areas have been properly secured before leaving the work site at the end of the day. Measures may include covering trenches and/or installing temporary fencing and safety lights. (Draft EIR page 3.13-27)	Construction contractors	Construction	Photographs of warning signs and barriers and compliance report to Muni/Western Boards	Monthly

Attachment A: Mitigation Monitoring and Reporting Plan

<i>Adopted Mitigation Measures (EIR page reference)</i>	<i>Responsible Party</i>	<i>Implementation Schedule</i>	<i>Reporting Procedures</i>	<i>Reporting Schedule</i>
Public Services, Utilities, and Transportation (continued)				
<p>MM PS-12: Consistent with the direction of the Seven Oaks Accord, to avoid a significant effect on groundwater levels at one or more index wells located outside the Pressure Zone, Muni/Western will spread sufficient water to maintain static groundwater levels at the affected index wells.</p> <p>To implement this mitigation measure, Muni/Western will use a groundwater monitoring program based on information derived from the index wells. This information will be used in conjunction with forecasts of groundwater levels derived from Muni/Western integrated surface and groundwater models to identify trends in groundwater levels and isolate the share of change attributable to the Project. Remedial action will be implemented prior to an actual 10-foot reduction being reached, to avoid the significant impact. (Draft EIR page 3.13-30 and Final EIR page 3-130)</p>	Muni/Western	Operations	Monitoring report to Muni/Western Boards	Monthly

**Attachment B: Summary of Resources and Geographic Areas
Affected by Both the Project and Related Projects (Draft EIR Table 6.1-2)**

Attachment B: Summary of Resources and Geographic Areas Affected by Both the Project and Related Projects

Resource Area	GEOGRAPHIC AREA						
	<i>Seven Oaks Dam & Reservoir Construction Area</i>	<i>SAR Construction Area</i>	<i>Devil Canyon Construction Area</i>	<i>Lytle Creek Construction Area</i>	<i>Santa Ana River</i>	<i>SBBA</i>	<i>Muni/Western Service Areas</i>
Surface Water Hydrology & Water Quality	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ EBX ▪ BO 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ BO ▪ Conservation District Application ▪ Riverside Application ▪ Chino Application ▪ OCWD Application ▪ RIX Water Recycling ▪ Pilot Dewatering 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Groundwater Hydrology & Water Quality	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ Restoration Project ▪ Conservation District Application ▪ Pilot Dewatering ▪ Riverside-Corona Feeder ▪ North/South Lake ▪ RIX Water Recycling 	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX ▪ Riverside-Corona Feeder
Biological Resources	<ul style="list-style-type: none"> ▪ Project ▪ BO 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ EBX ▪ BO ▪ Restoration Project 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ BO ▪ Conservation District Application ▪ Riverside Application ▪ Chino Application ▪ OCWD Application ▪ RIX Water Recycling 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX

Attachment B: Summary of Resources and Geographic Areas Affected by Both the Project and Related Projects

Resource Area	GEOGRAPHIC AREA						
	<i>Seven Oaks Dam & Reservoir Construction Area</i>	<i>SAR Construction Area</i>	<i>Devil Canyon Construction Area</i>	<i>Lytle Creek Construction Area</i>	<i>Santa Ana River</i>	<i>SBBA</i>	<i>Muni/Western Service Areas</i>
Geology, Soils, & Mineral Resources	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ EBX ▪ Inland Feeder ▪ Restoration Project ▪ BO ▪ Conservation District Application 	<ul style="list-style-type: none"> ▪ Project ▪ Inland Feeder 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ Restoration Project ▪ Conservation District Application ▪ Pilot Dewatering ▪ Riverside-Corona Feeder ▪ North/South Lake 	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Land Use & Planning	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ Restoration Project ▪ Conservation District Application ▪ Pilot Dewatering ▪ Riverside-Corona Feeder ▪ North/South Lake 	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Agricultural Resources	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan 	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX ▪ RIX Water Recycling
Recreational Resources	The Project would not impact this resource in this	The Project would not impact this resource in this	The Project would not impact this resource in this	The Project would not impact this resource in this	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX

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Resource Area	GEOGRAPHIC AREA						
	<i>Seven Oaks Dam & Reservoir Construction Area</i>	<i>SAR Construction Area</i>	<i>Devil Canyon Construction Area</i>	<i>Lytle Creek Construction Area</i>	<i>Santa Ana River</i>	<i>SBBA</i>	<i>Muni/Western Service Areas</i>
	geographic area.	geographic area.	geographic area.	geographic area.		geographic area.	
Air Quality	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ EBX ▪ Restoration Project ▪ BO 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Cultural & Paleontological Resources	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Mast Plan ▪ EBX ▪ Restoration Project ▪ BO 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Noise	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ EBX ▪ Restoration Project ▪ BO 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Aesthetics	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ EBX ▪ Restoration Project 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ BO ▪ Conservation District Application ▪ Riverside Application ▪ Chino Application ▪ OCWD Application ▪ RIX Water Recycling ▪ Pilot Dewatering 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX

Attachment B: Summary of Resources and Geographic Areas Affected by Both the Project and Related Projects

Resource Area	GEOGRAPHIC AREA						
	<i>Seven Oaks Dam & Reservoir Construction Area</i>	<i>SAR Construction Area</i>	<i>Devil Canyon Construction Area</i>	<i>Lytle Creek Construction Area</i>	<i>Santa Ana River</i>	<i>SBBA</i>	<i>Muni/Western Service Areas</i>
Hazardous Materials & Groundwater Contamination	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ EBX 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ Restoration Project ▪ Conservation District Application ▪ Pilot Dewatering ▪ Riverside-Cornoa Feeder ▪ North/South Lake 	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
Public Services, Utilities, & Transportation	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ EBX ▪ Restoration Project 	<ul style="list-style-type: none"> ▪ Project 	<ul style="list-style-type: none"> ▪ Project 	The Project would not impact this resource in this geographic area.	<ul style="list-style-type: none"> ▪ Project ▪ Wash Plan ▪ Master Plan ▪ Restoration Project ▪ Conservation District Application ▪ Pilot Dewatering ▪ Riverside-Corona Feeder ▪ North/South Lake 	<ul style="list-style-type: none"> ▪ Project ▪ Master Plan ▪ EBX
<p><i>Notes:</i> Project names used in this table are abbreviations. Full names (with the abbreviations) are provided in the subsection headings in the main body of the chapter.</p>							