

# CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report/Environmental Impact Statement

## Fresno to Bakersfield Section

# Checkpoint B Summary Report Appendix E-1C

March 2011

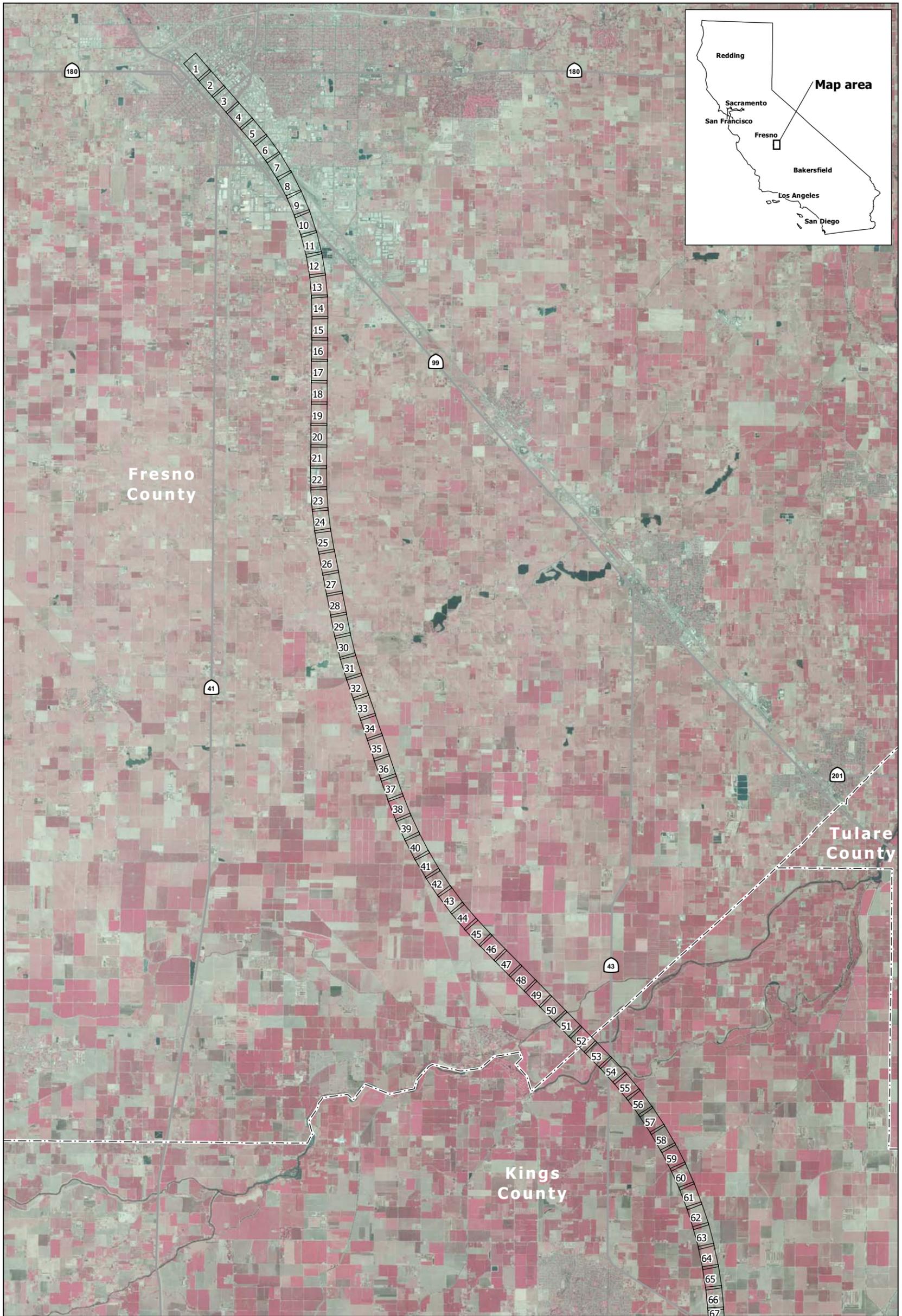


**CALIFORNIA**  
High-Speed Rail Authority



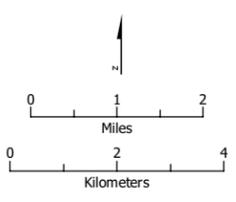
U.S. Department of Transportation  
Federal Railroad Administration



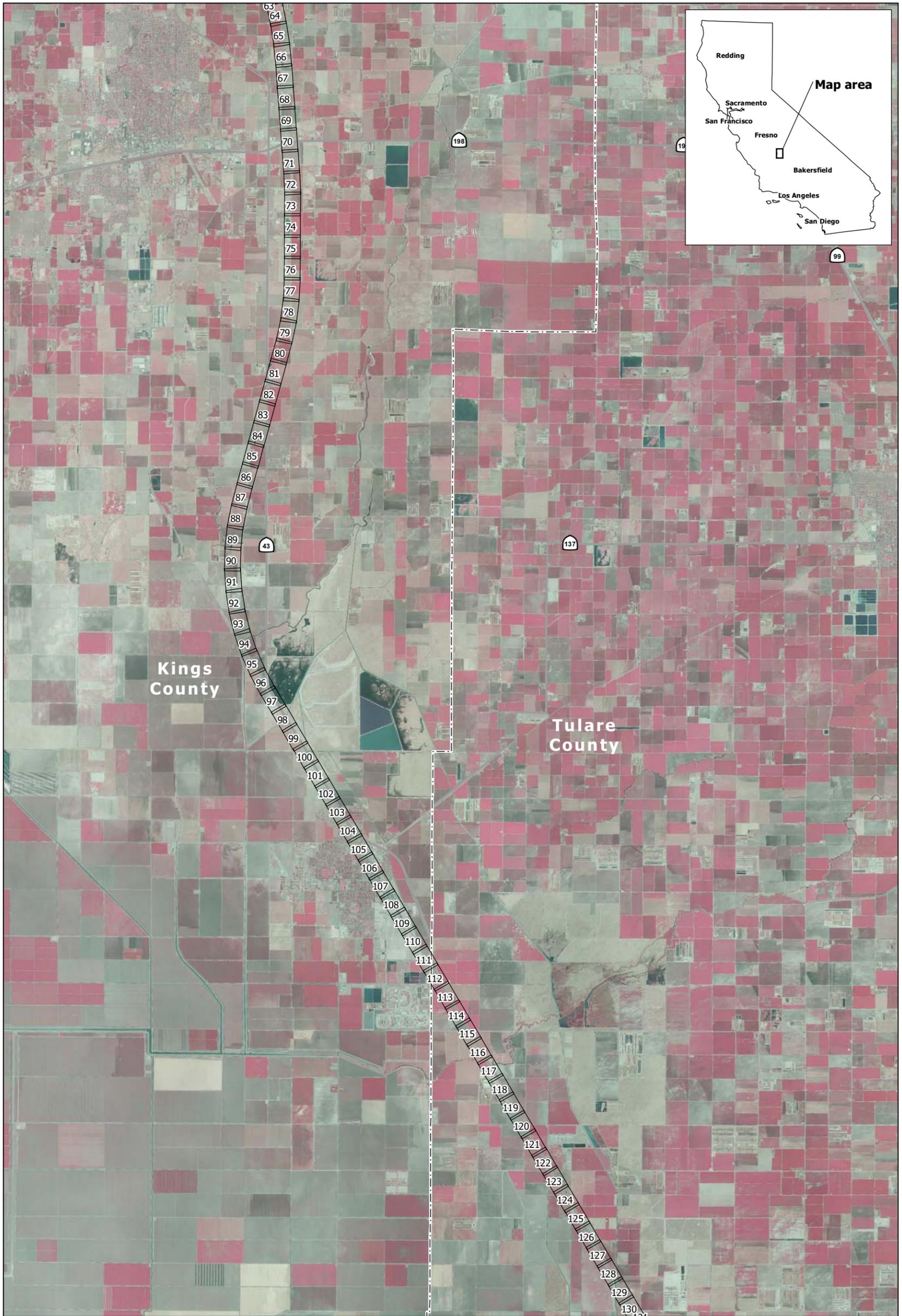


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Source: URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2009

February 10, 2011

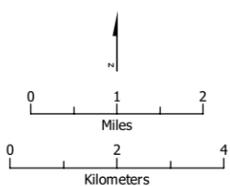


- County boundary
- Highway

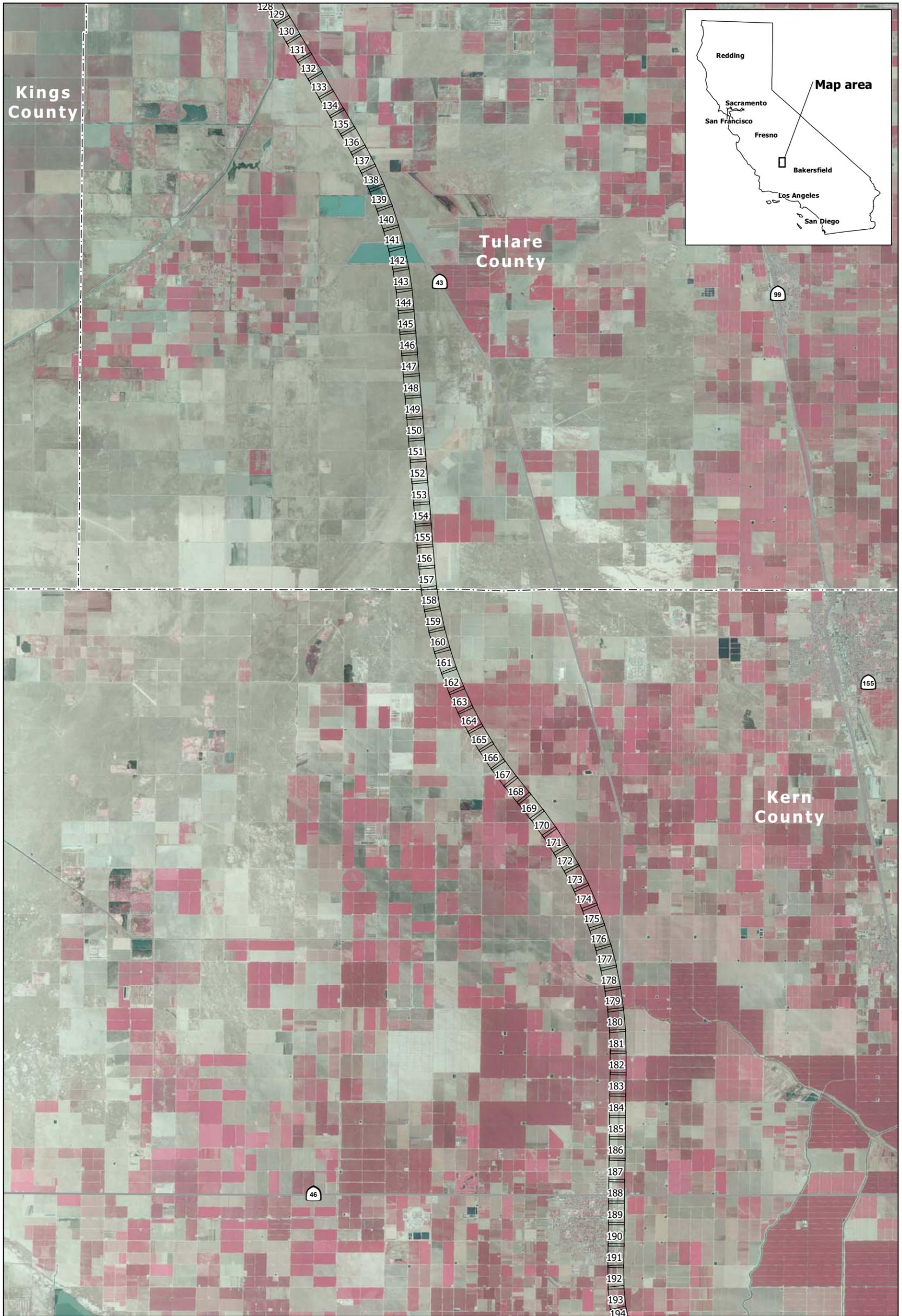


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
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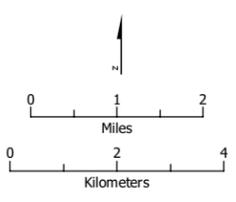


- County boundary
- Highway

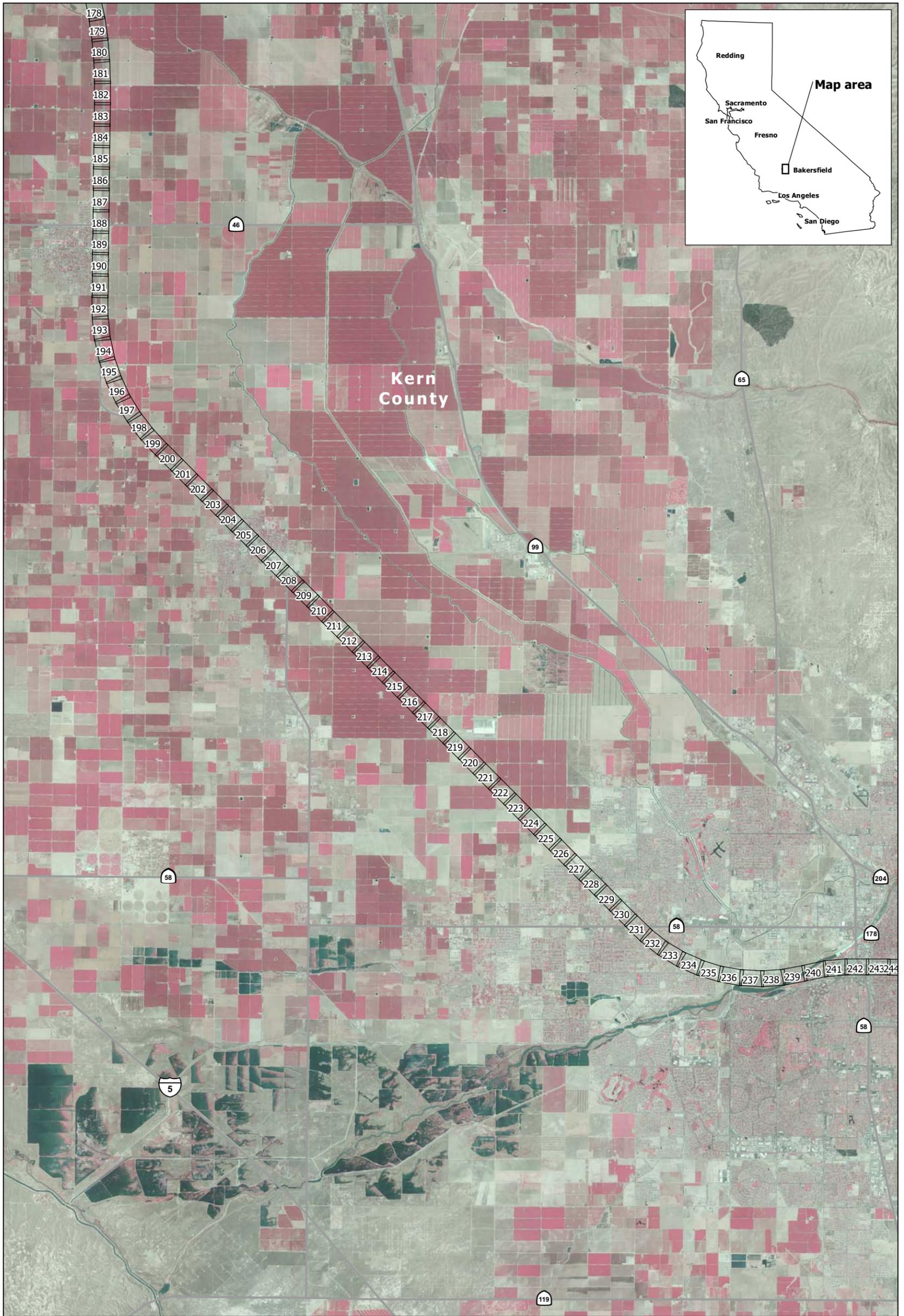


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
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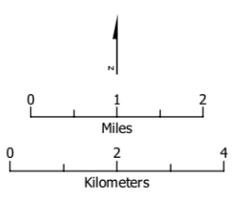


- County boundary
- Highway

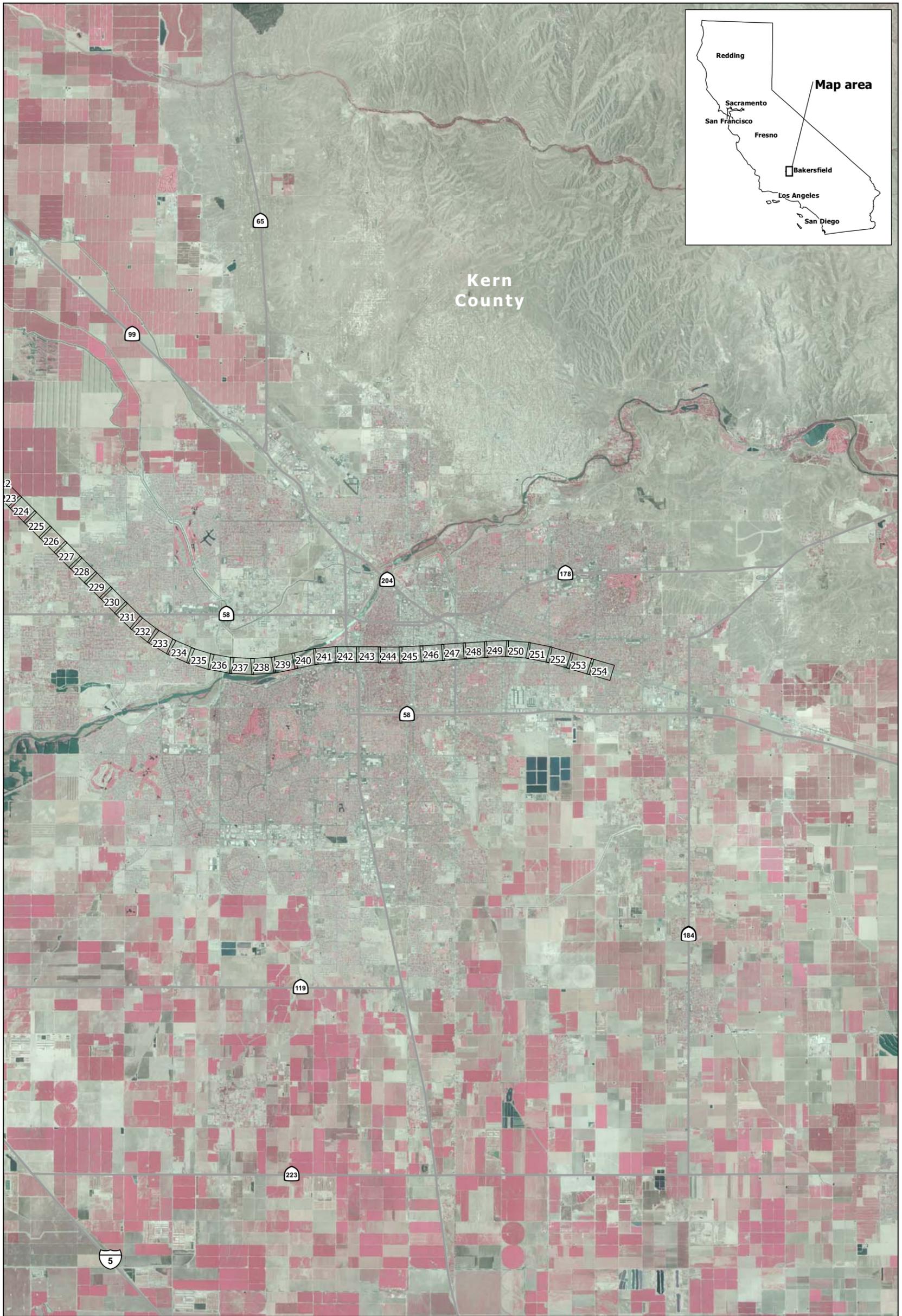


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February 10, 2011

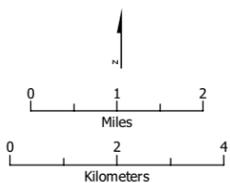


- County boundary
- Highway



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Source: URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2009

February 10, 2011



- County boundary
- Highway



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

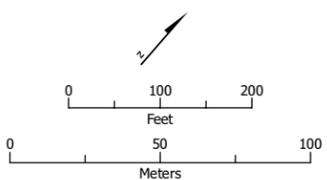
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c Sheet 1**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

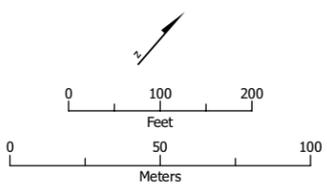
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c Sheet 2**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

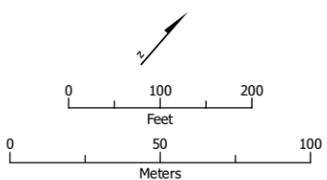
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c Sheet 3**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

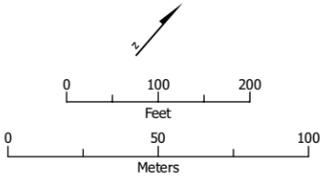


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

February 10, 2011

**Appendix E-1c  
Sheet 4**

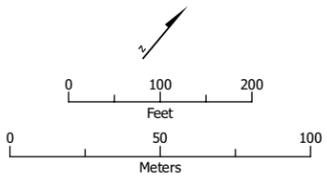
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 5**

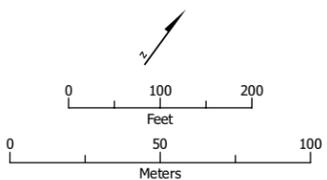
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
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**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 6**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

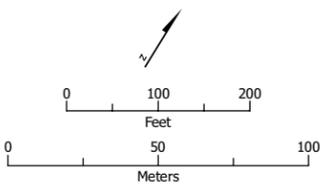
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 7**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



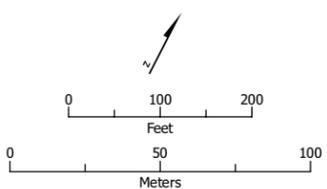
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 8**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

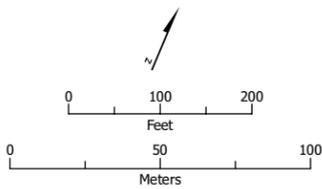
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c Sheet 9**

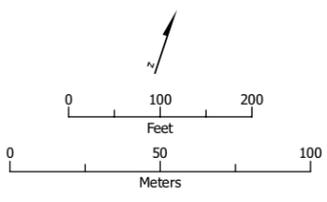
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

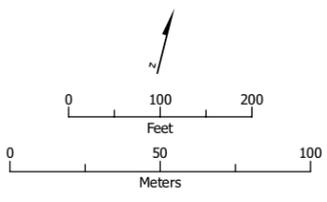
**Appendix E-1c  
 Sheet 10**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

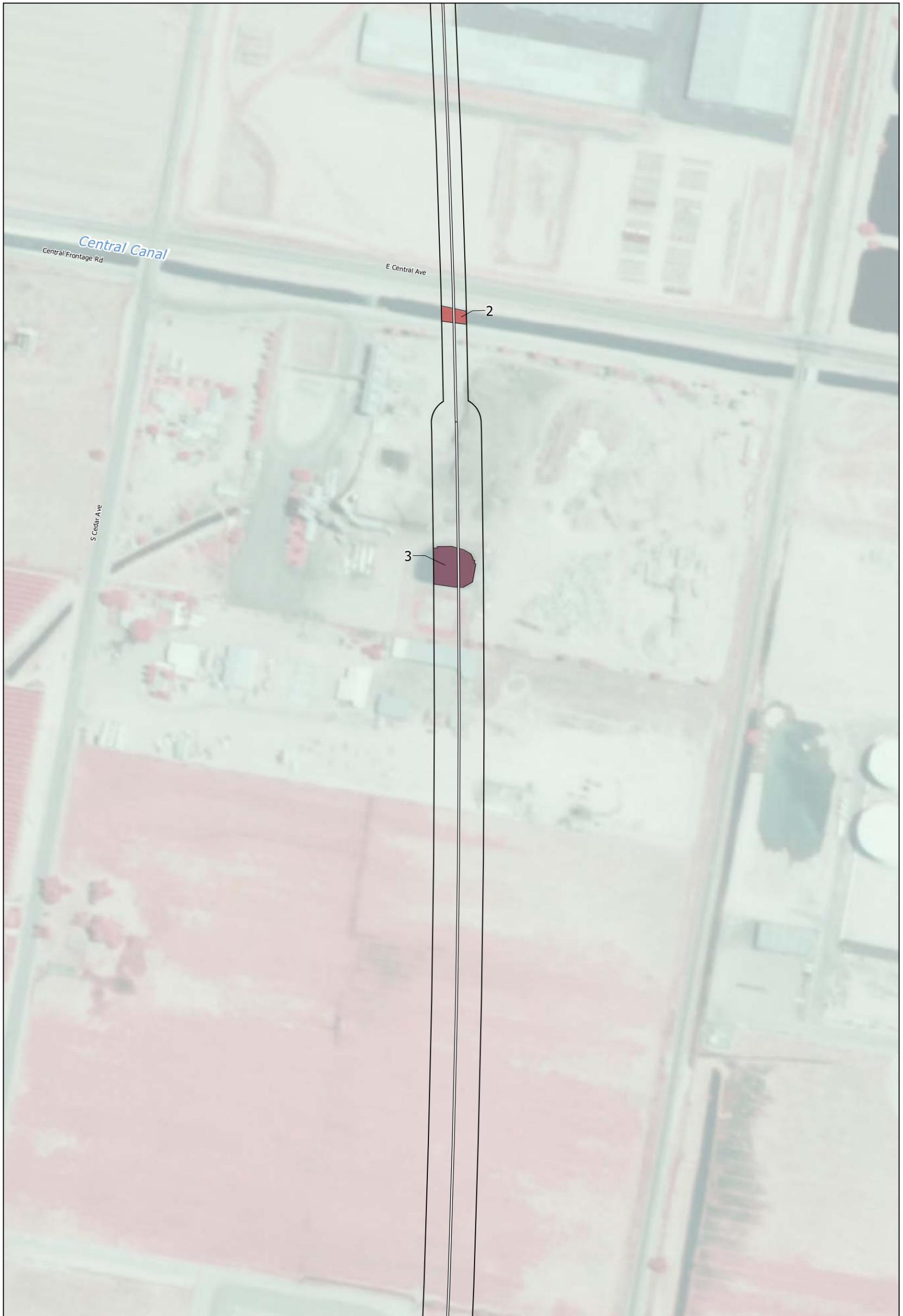
Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
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- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

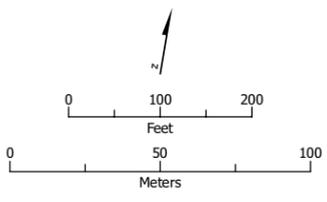
**Appendix E-1c**  
**Sheet 11**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
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- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

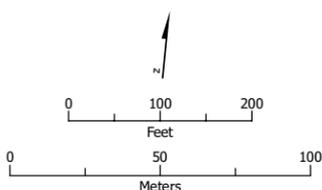
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
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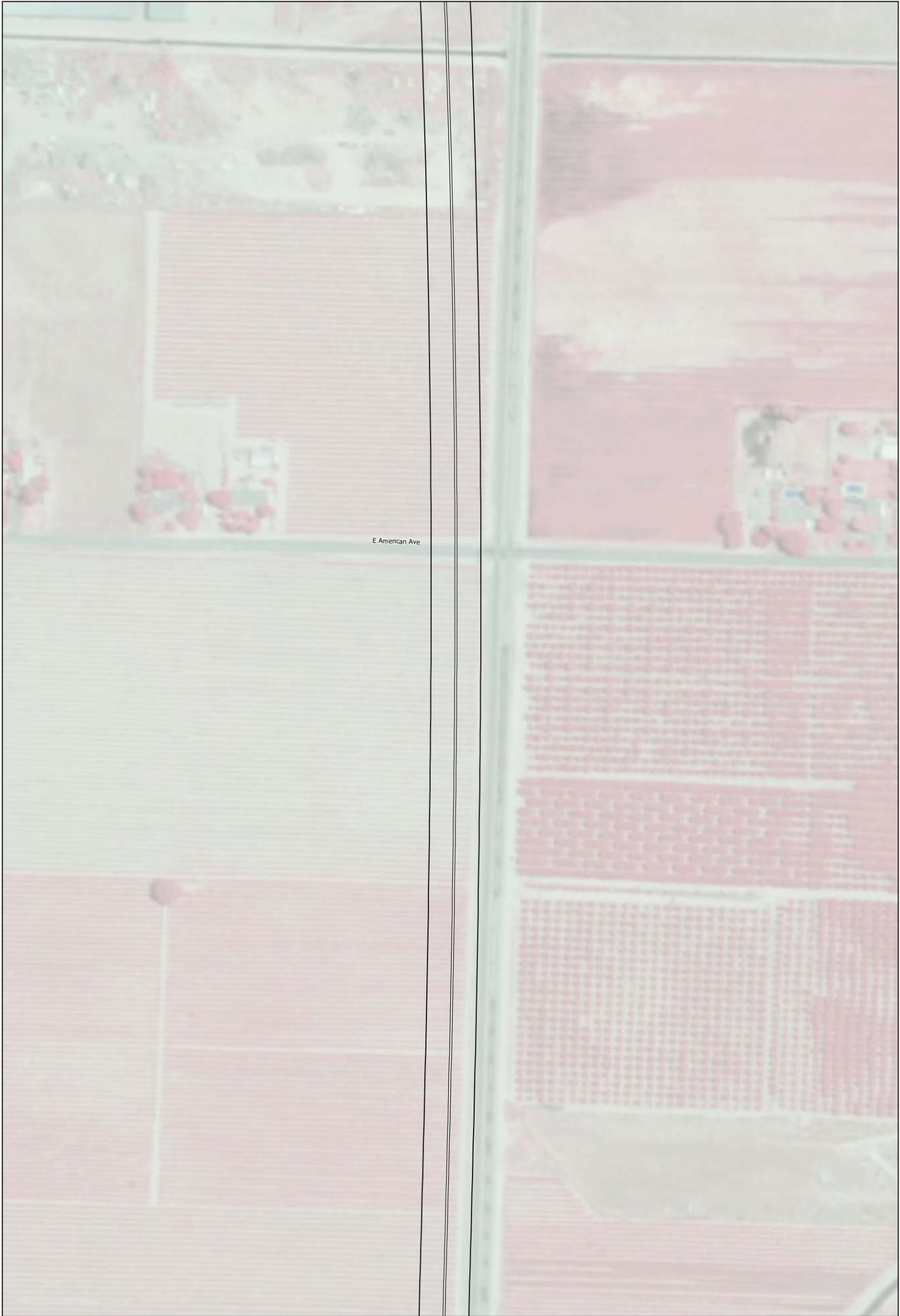
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 13**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

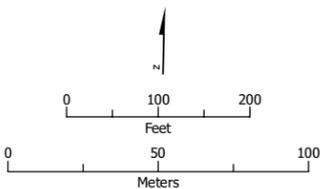
Imagery source: USDA NAIP, color infrared, 2005

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**Special aquatic resources with feature number**

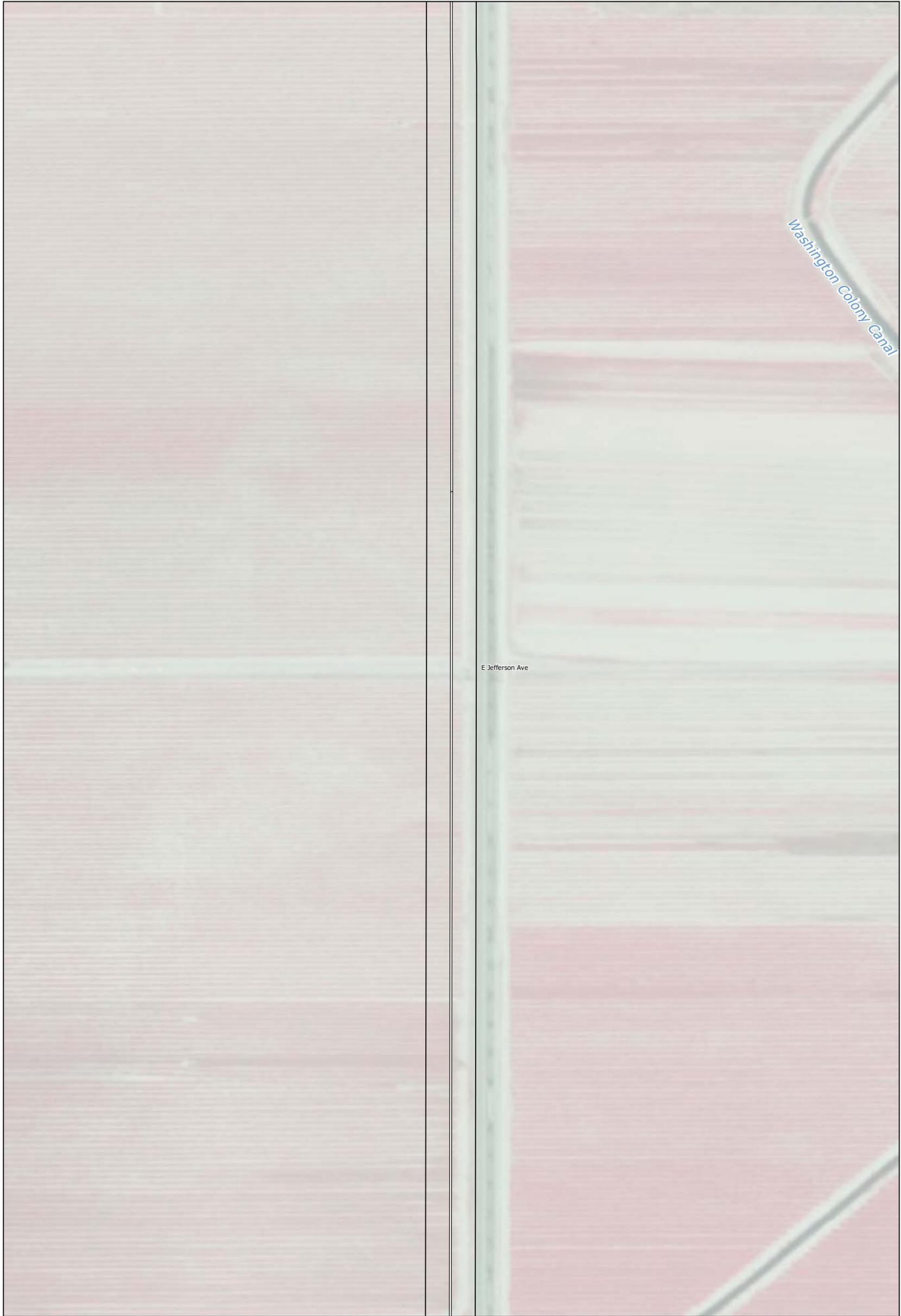
- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 14**

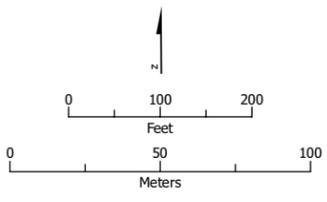
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
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- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

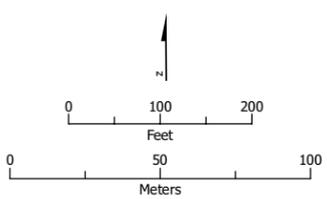
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

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Data source: Special aquatic resources - URS, 2010  
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- Special aquatic resources with feature number**
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  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



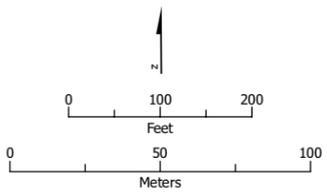
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

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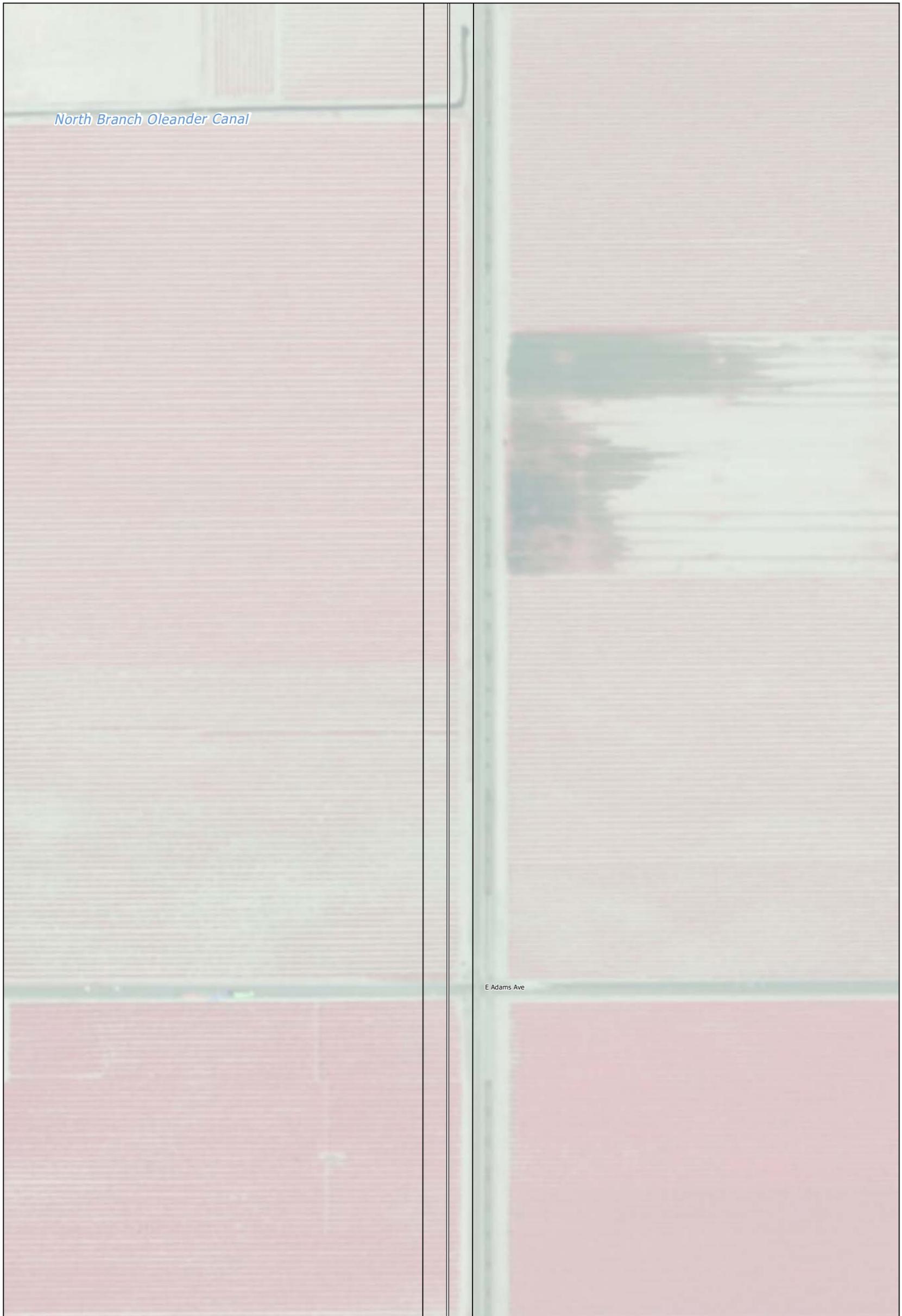
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 17**

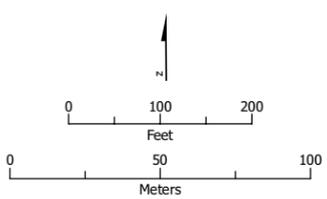
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
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- Special aquatic resources with feature number**
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  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

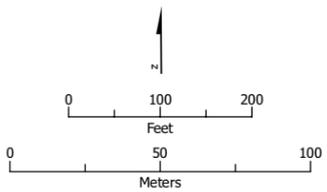
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



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Data source: Special aquatic resources - URS, 2010  
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**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 19**

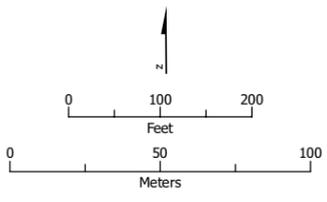
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

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Data source: Special aquatic resources - URS, 2010  
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- Special aquatic resources with feature number**
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  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

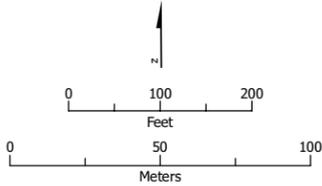
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  - Riverine
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  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

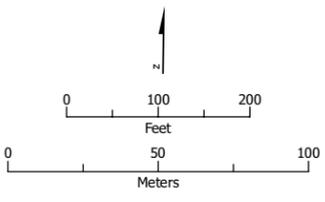




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  - Retention/Detention basin
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  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

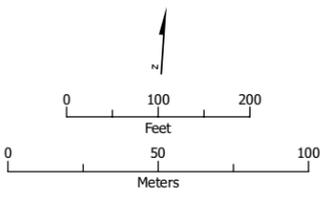
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 23**

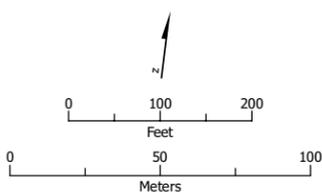
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 24**

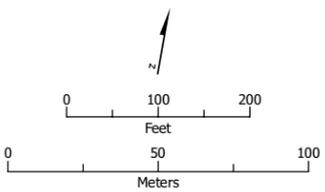
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 25**

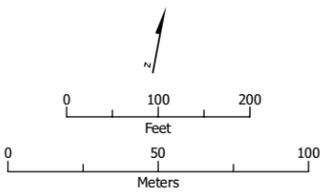
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 26**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

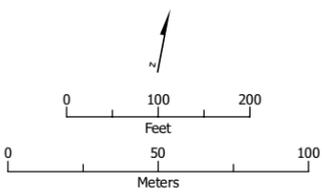
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 27**

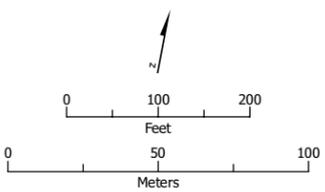
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 28**

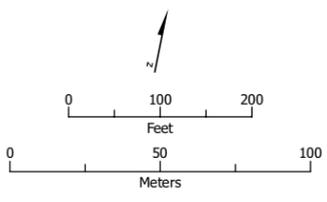
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

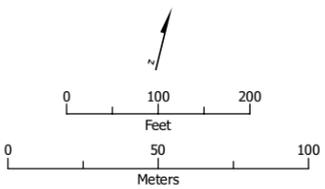
**Appendix E-1c  
 Sheet 29**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



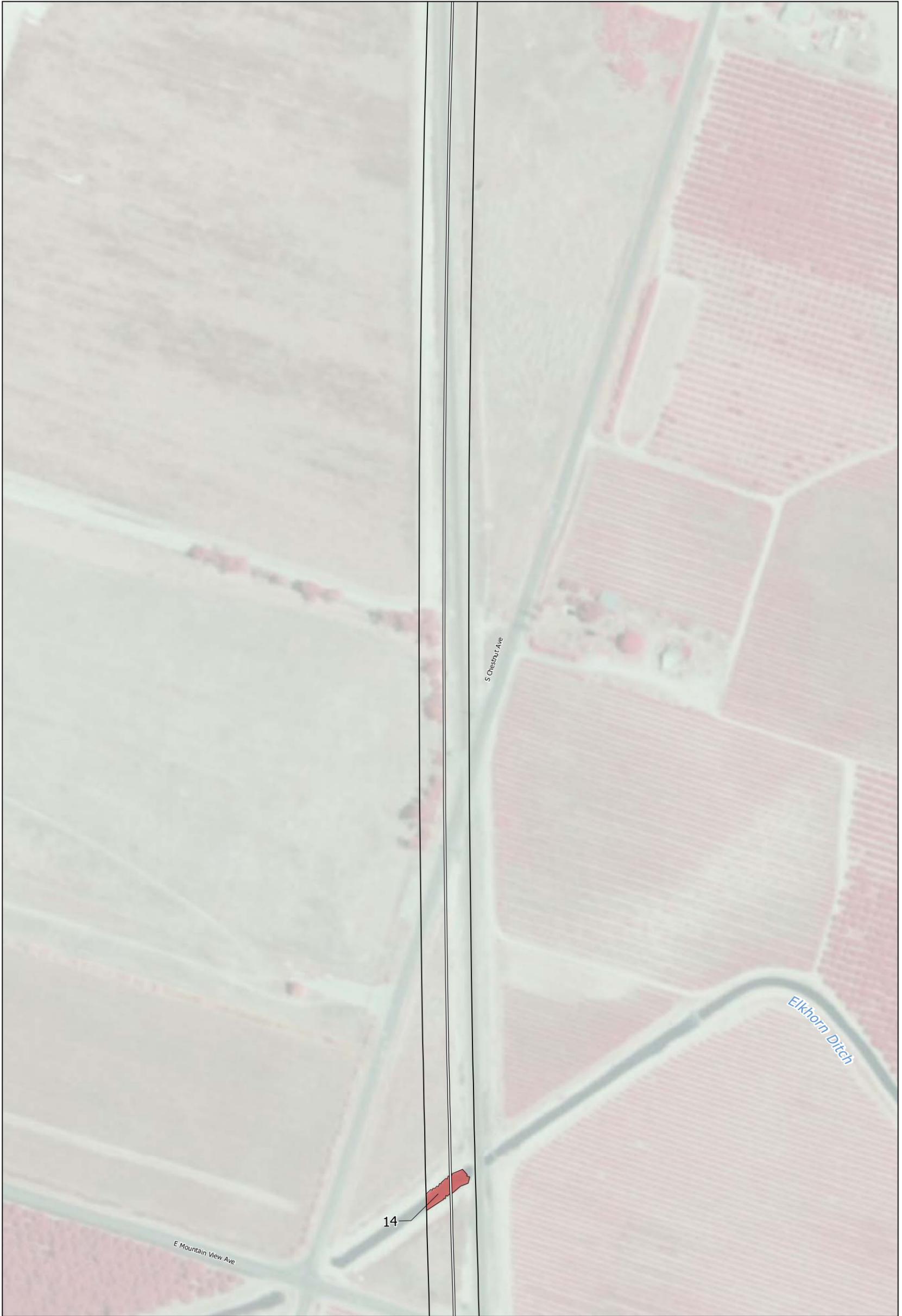
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 30**

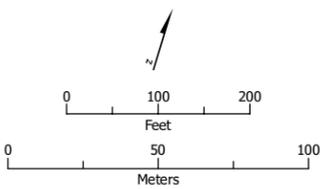
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 31**

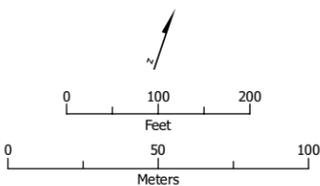
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 32**

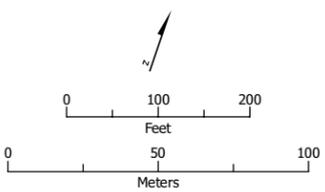
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 33**

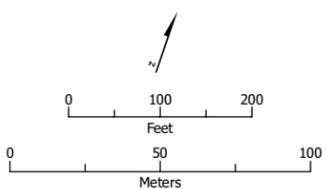
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

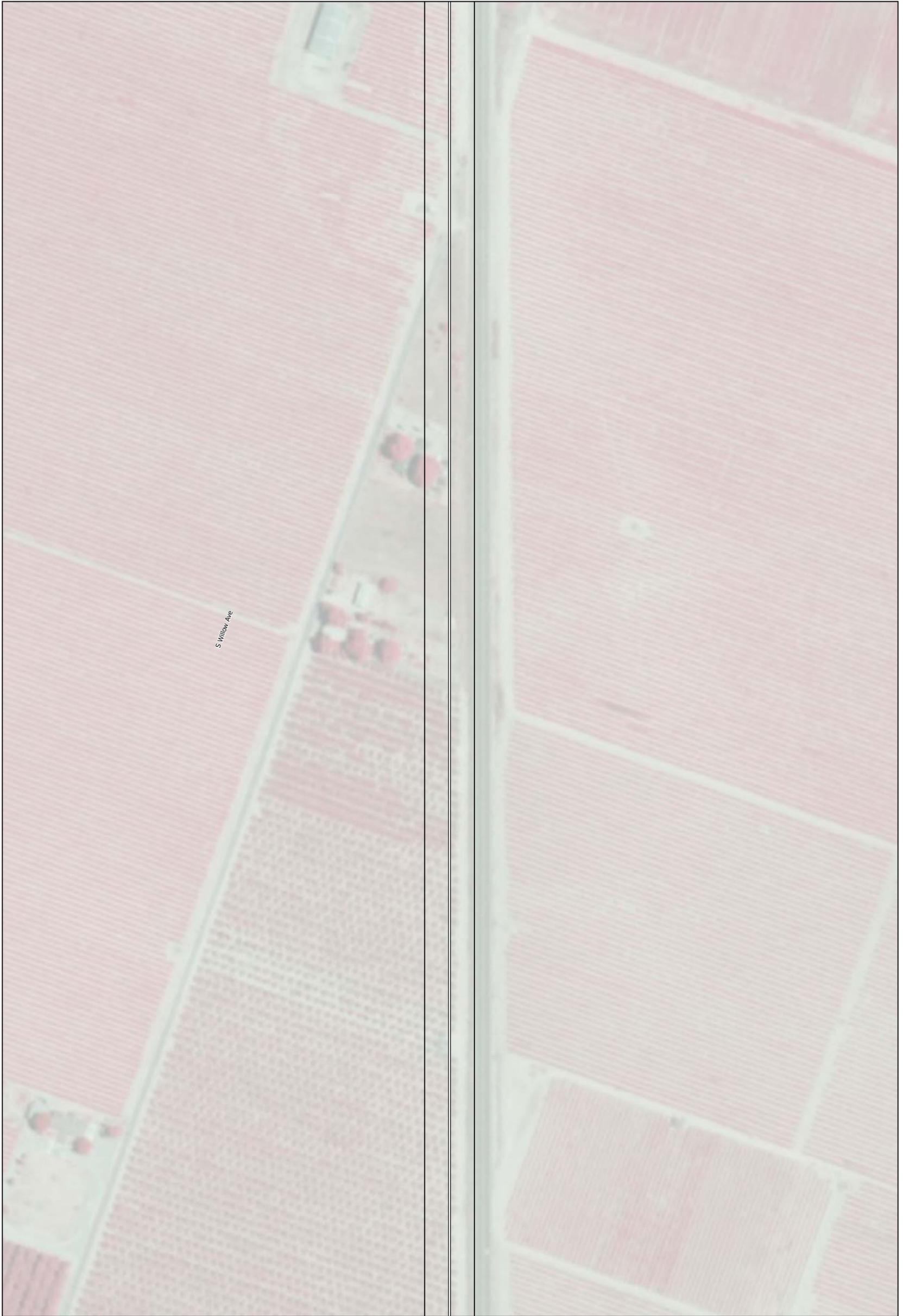


- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 34**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



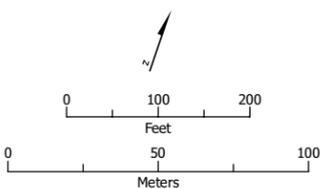
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 35**

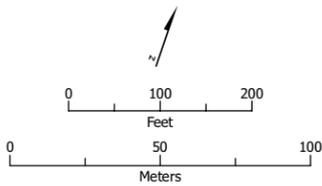
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 36**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



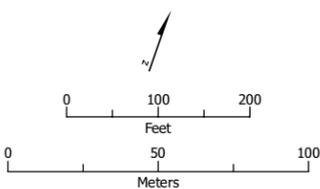
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 37**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



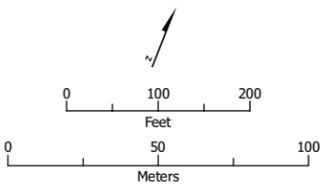
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 38**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



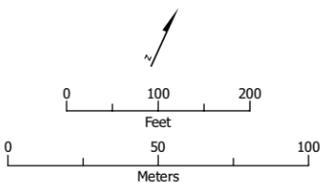
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 39**

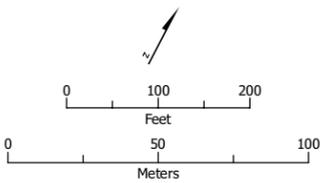
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 40**

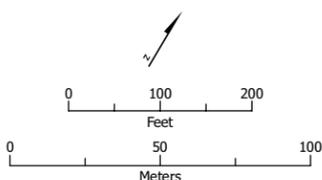
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 41**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



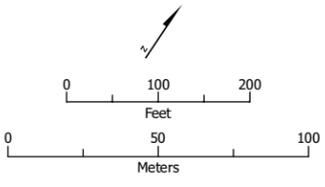
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



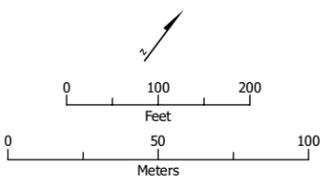
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 43**

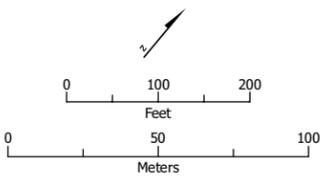
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



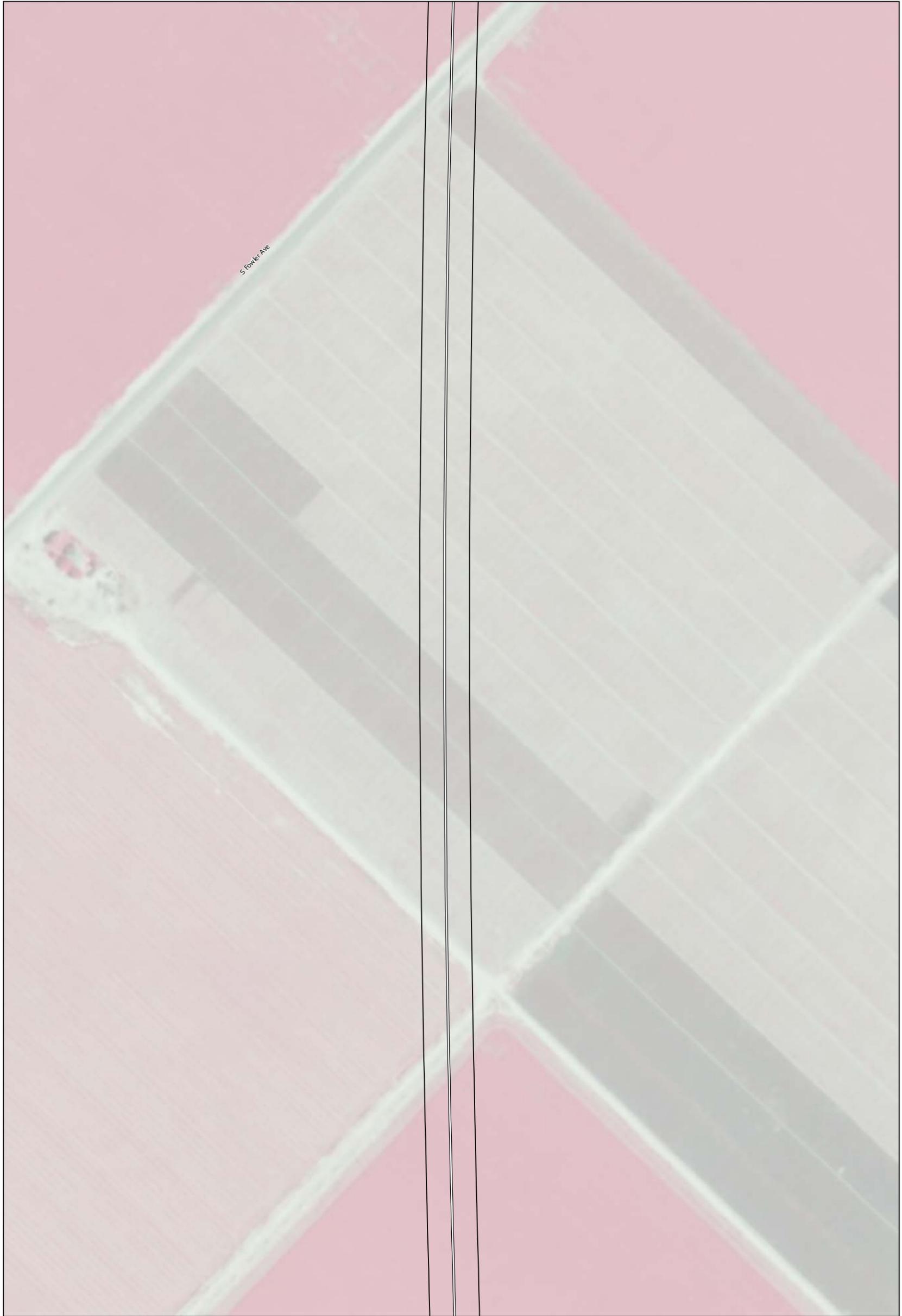
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 44**

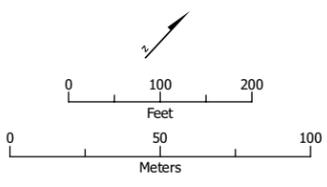
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

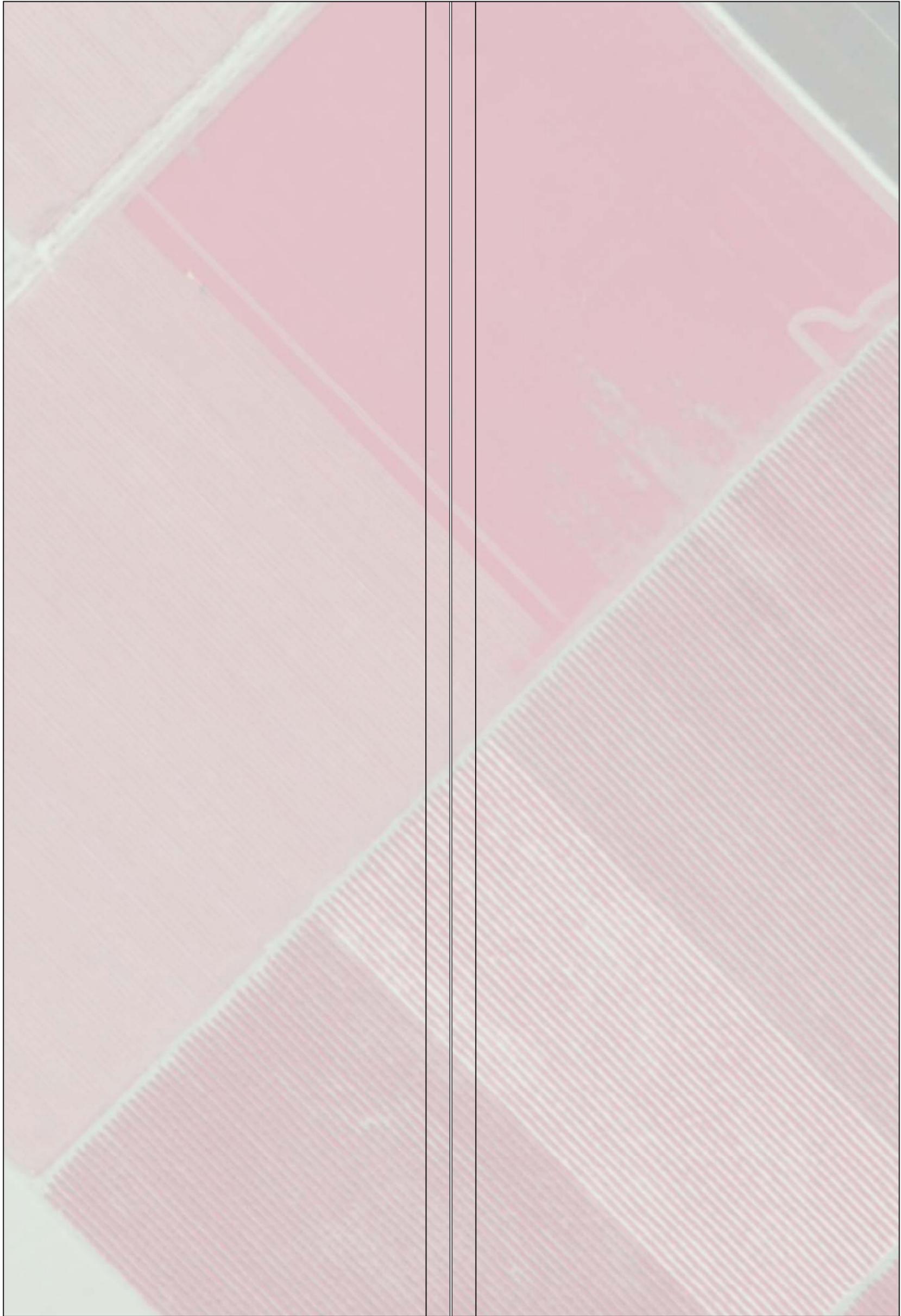
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

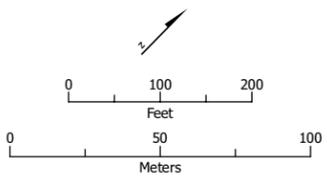
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

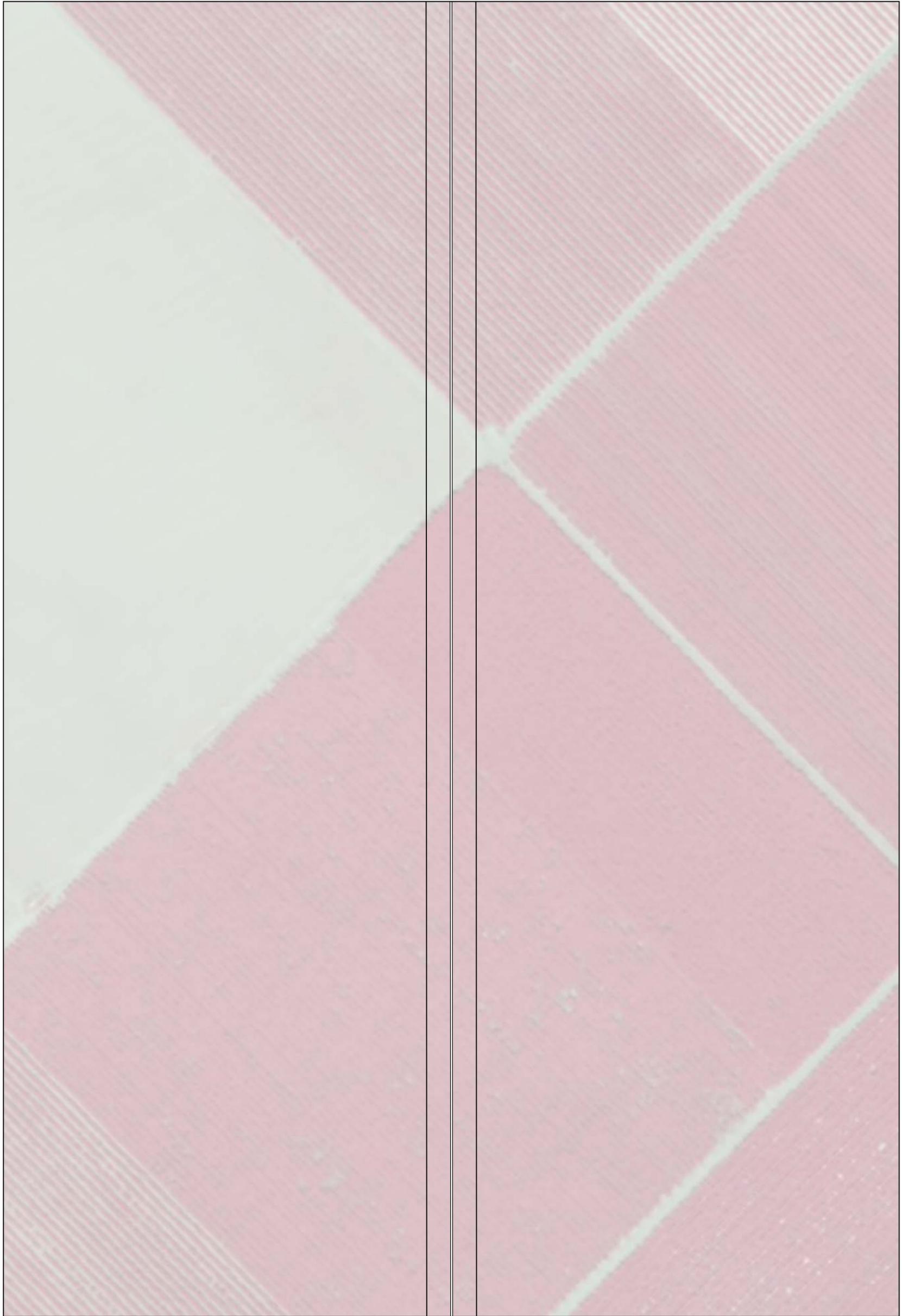
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

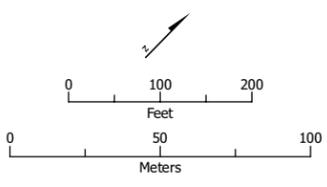
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

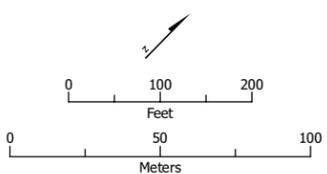
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 48**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

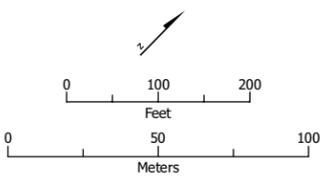
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 49**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

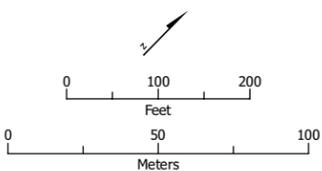
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 50**

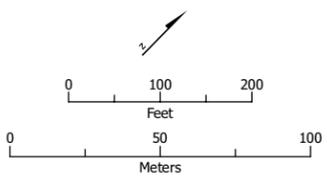
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 51**  
 Estimated special aquatic resources located  
 within the BNSF avoidance alternative alignment area



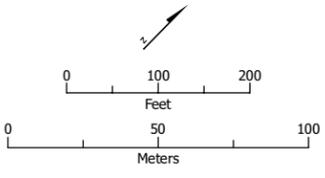
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

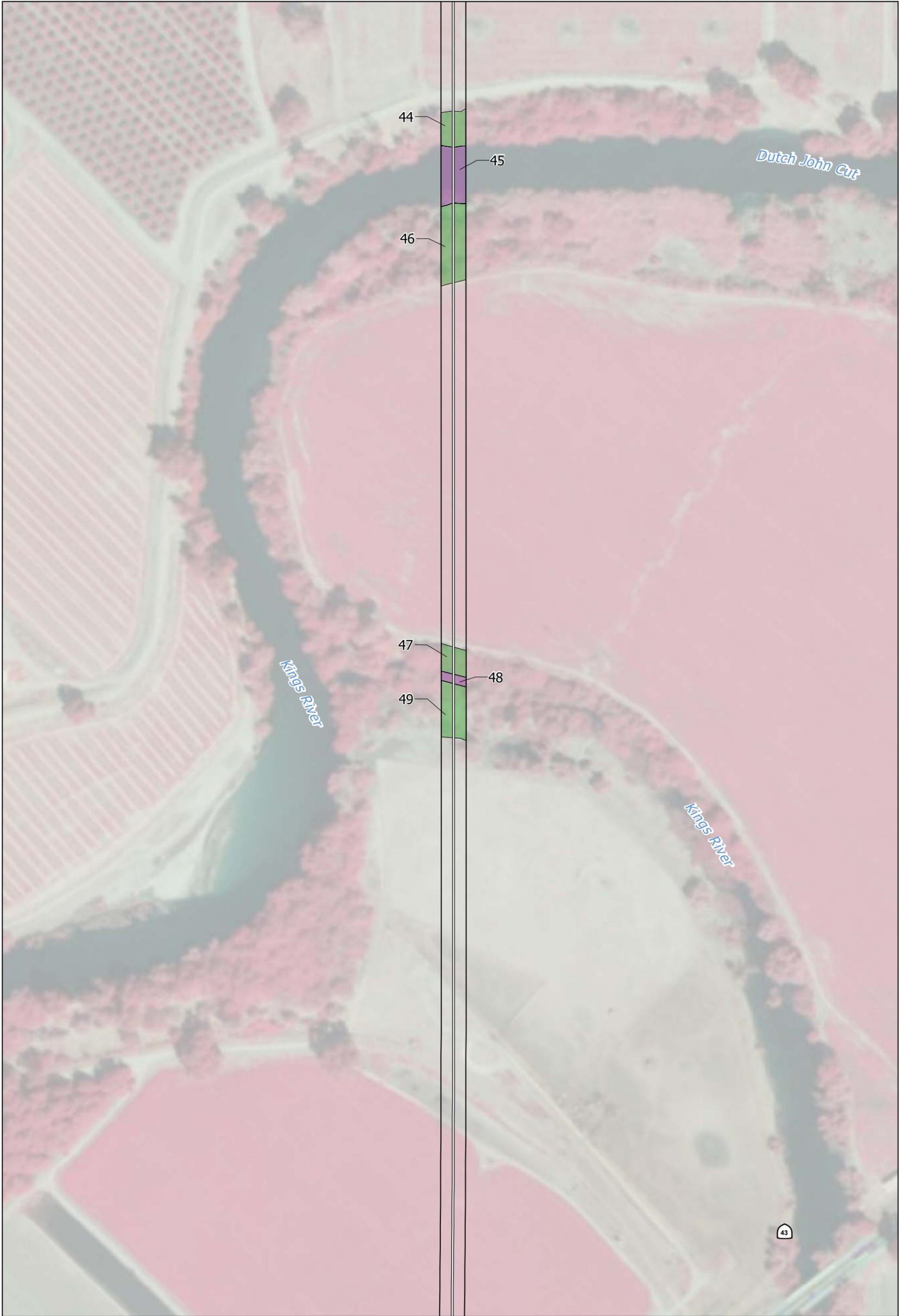
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

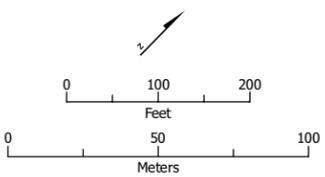
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 53**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



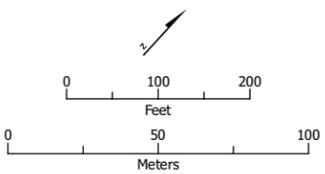
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 54**

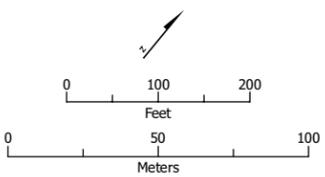
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



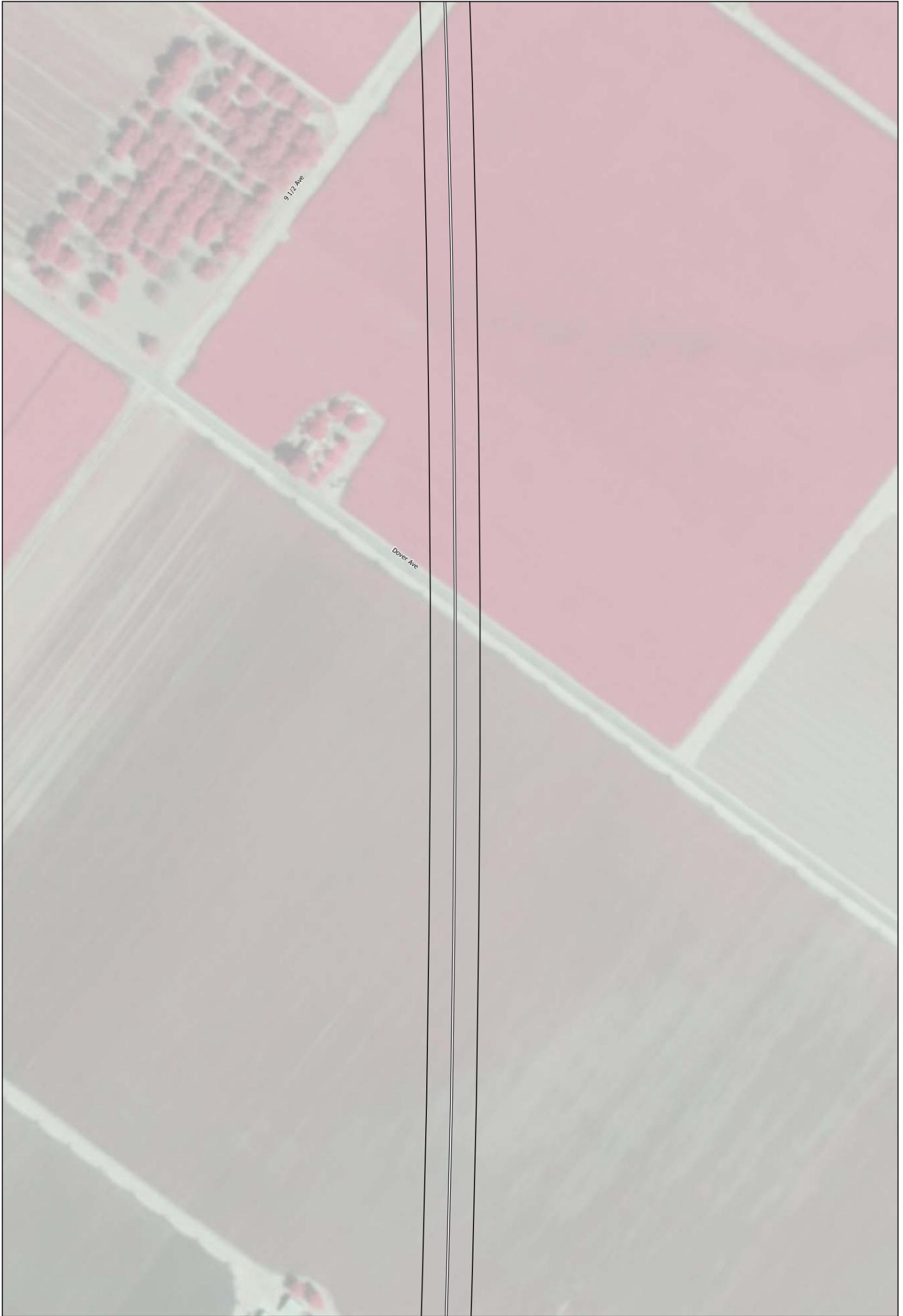
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 55**

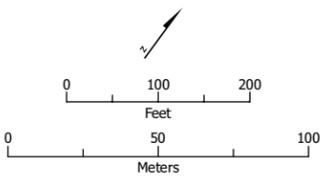
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 56**

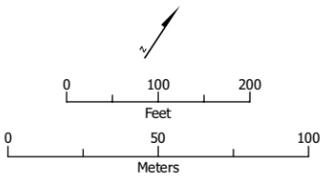
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



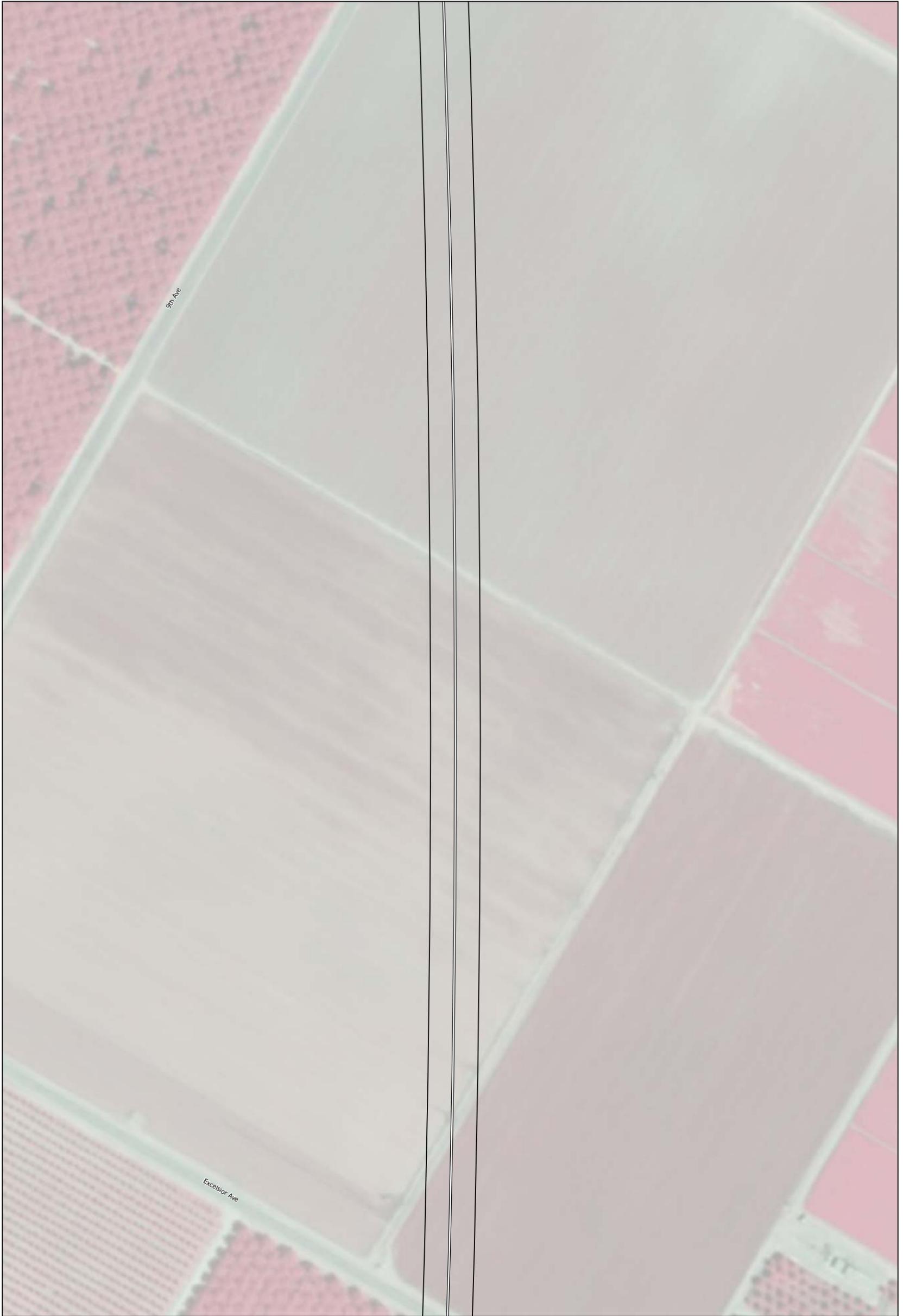
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 57**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



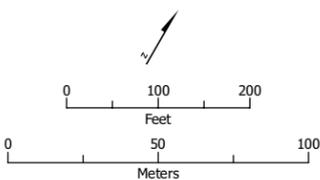
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 58**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

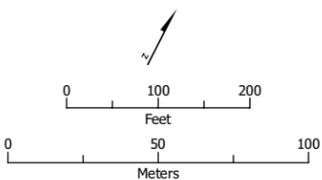
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

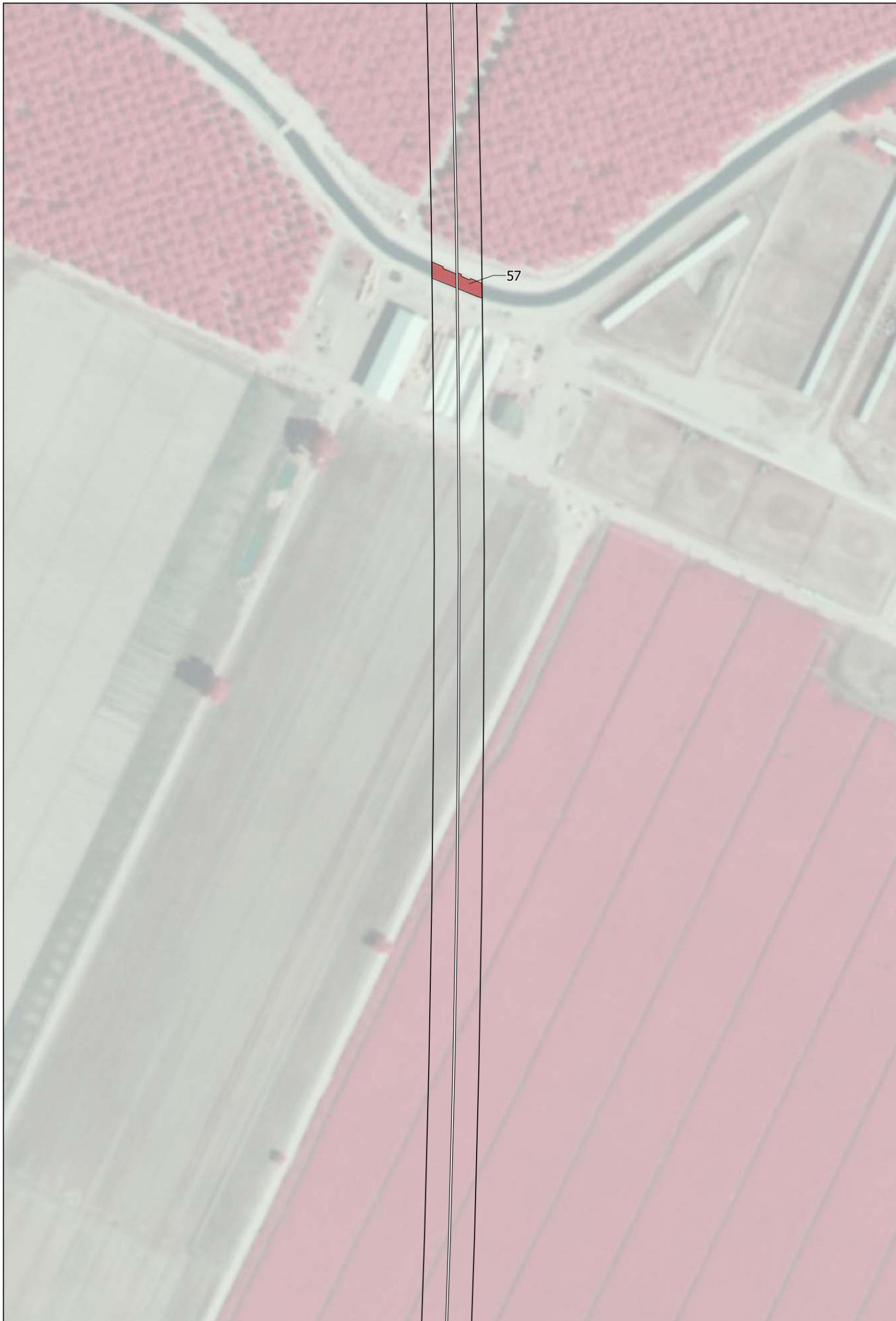
- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 59**

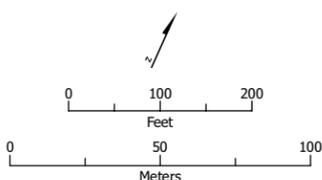
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 60**

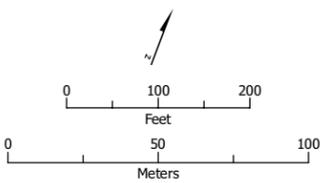
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 61**

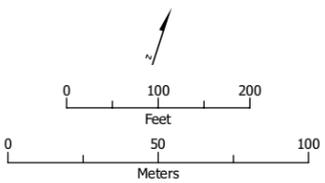
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 62**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



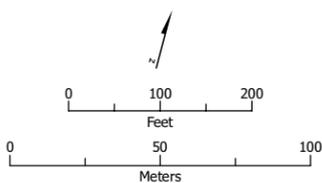
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 63**

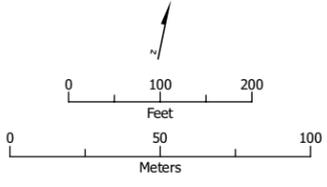
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

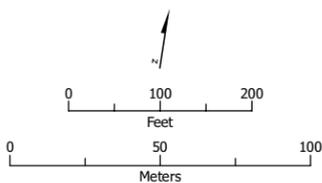
**Appendix E-1c  
 Sheet 64**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 65**

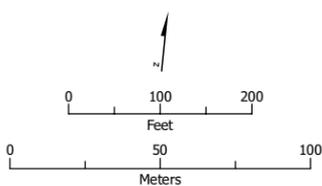
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 66**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



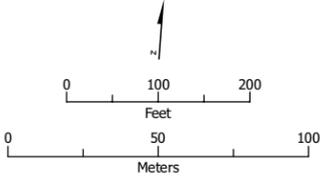
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



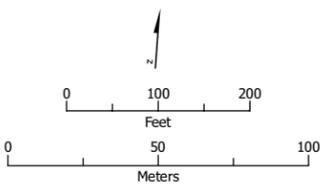
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 68**

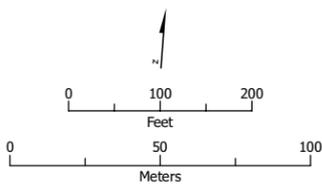
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 69**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



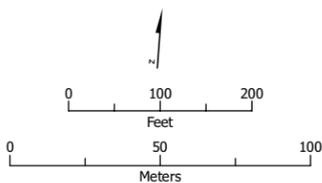
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



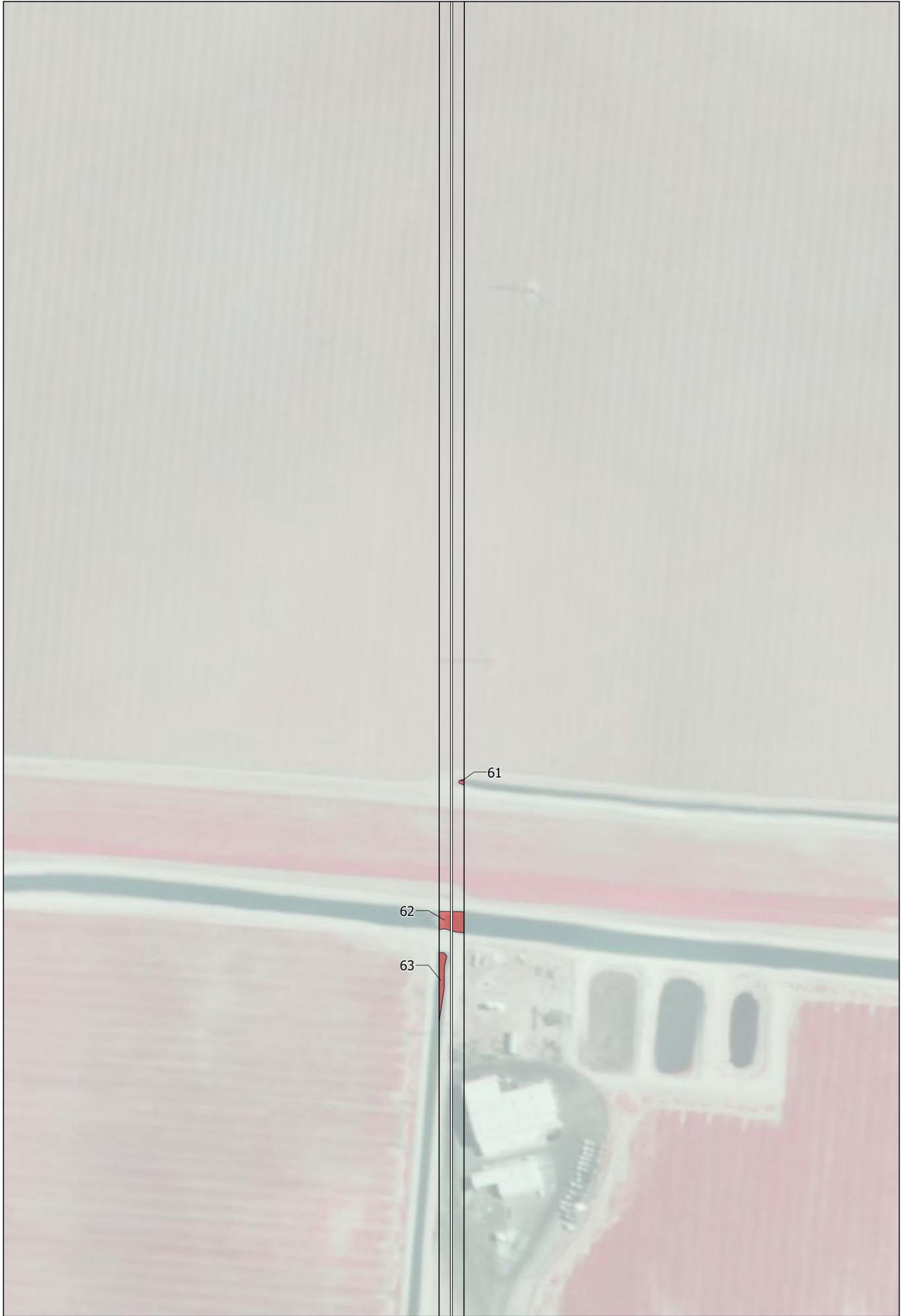
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 70**

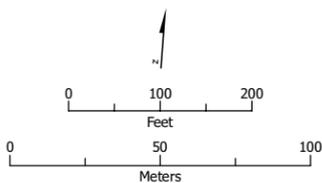
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 71**

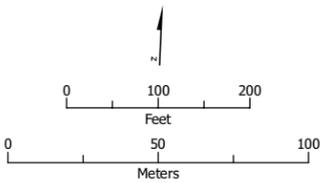
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



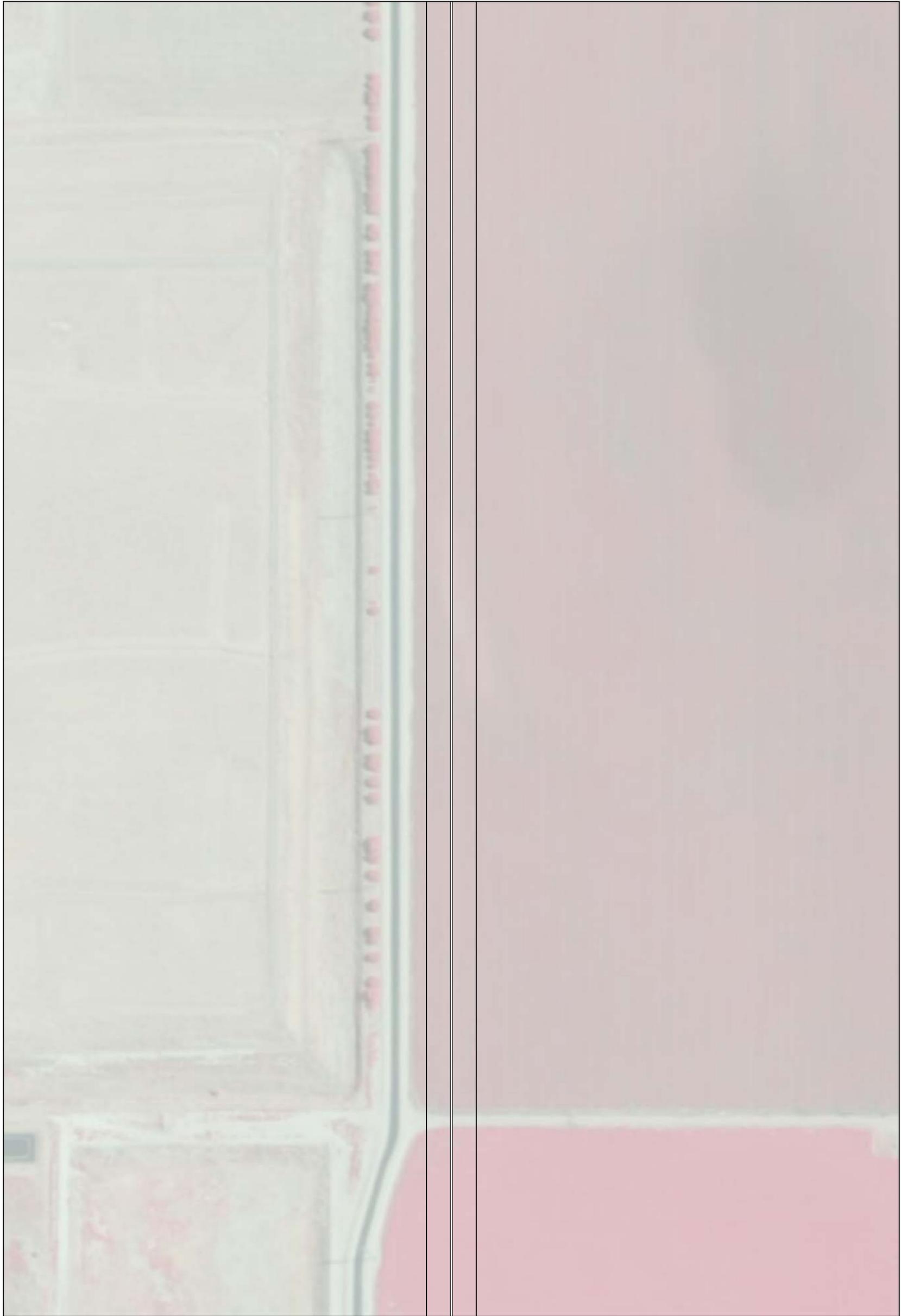
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 72**

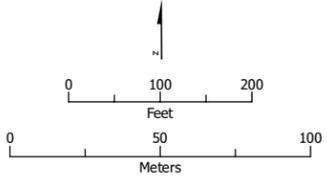
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



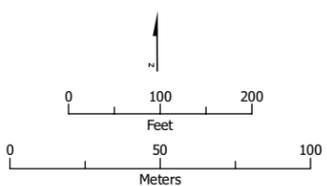
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 74**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



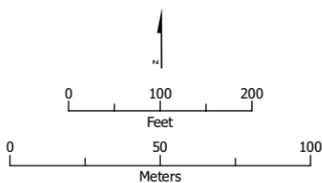
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



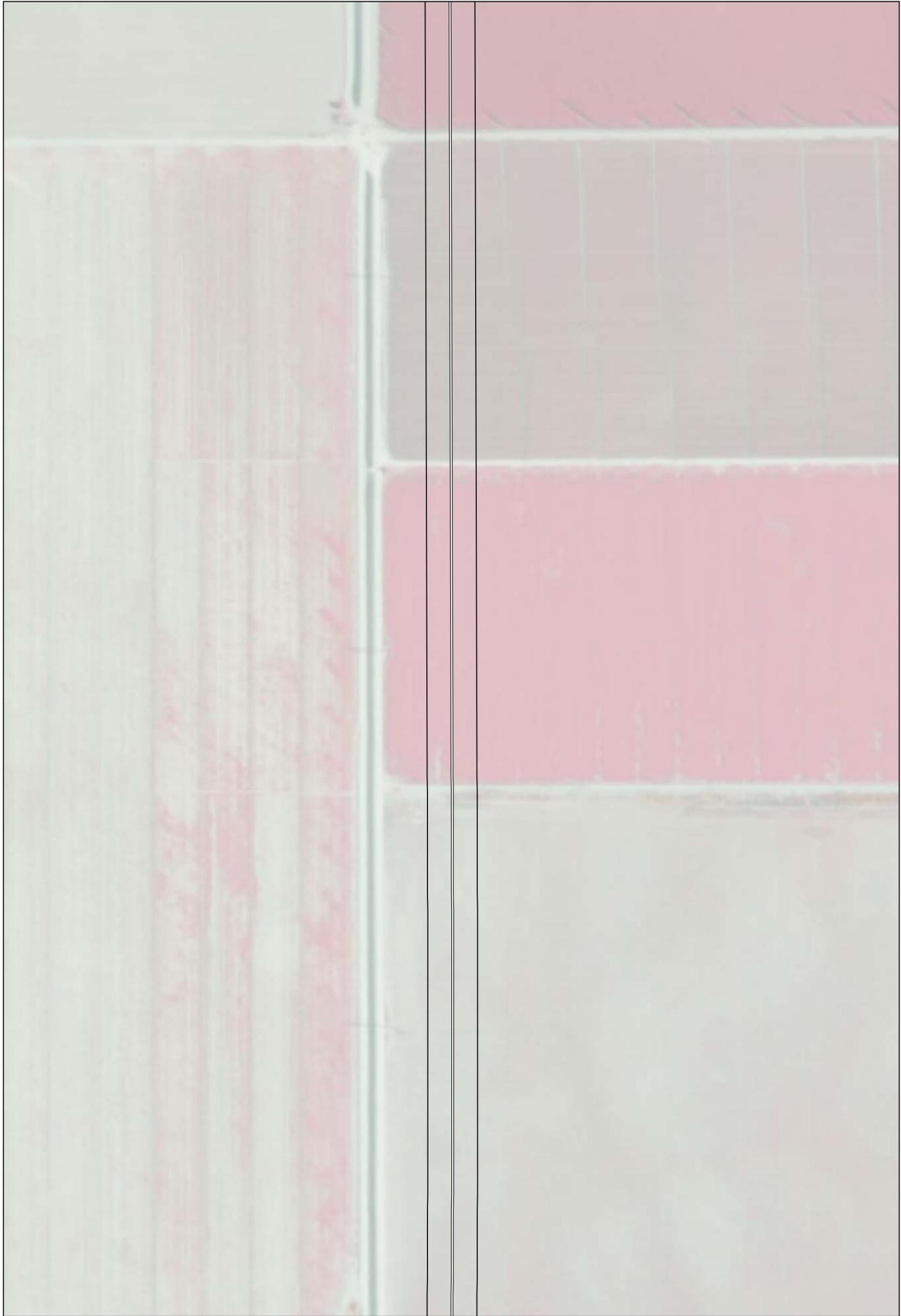
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 75**

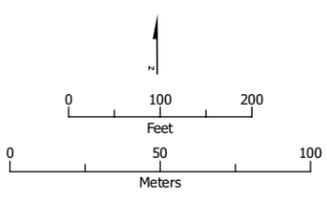
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

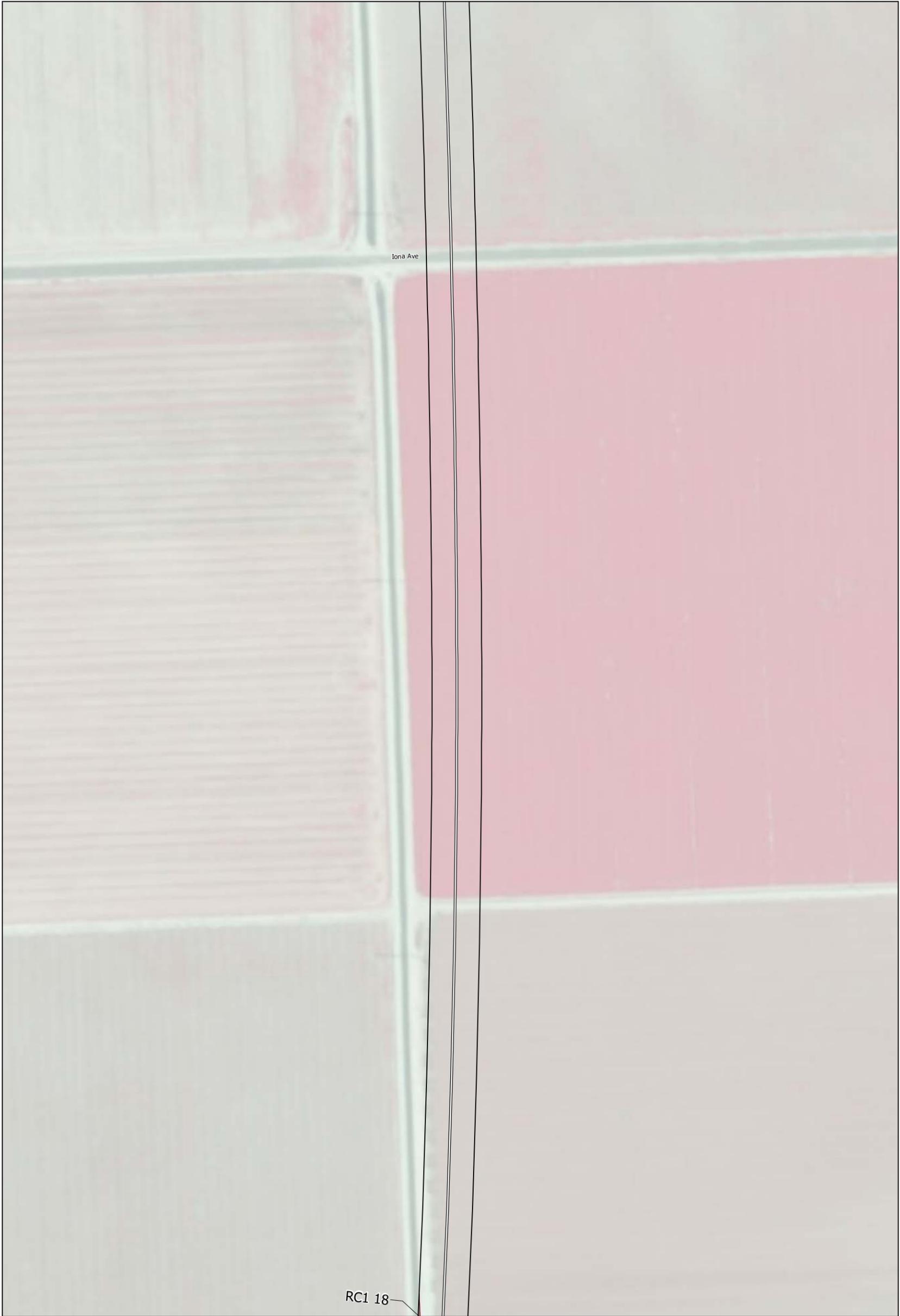
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



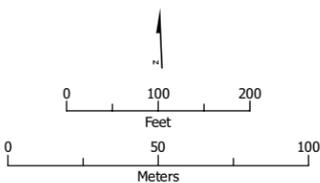
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 77**

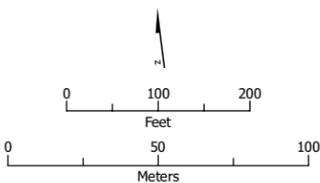
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 78**

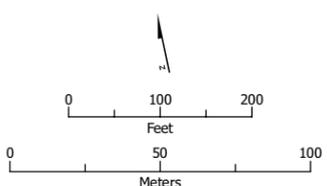
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 79**

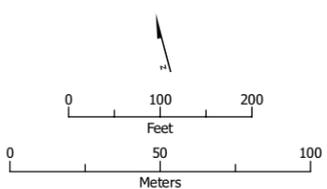
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 80**

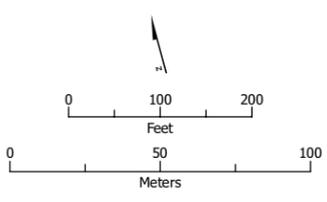
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 81**  
 Estimated special aquatic resources located  
 within the BNSF avoidance alternative alignment area



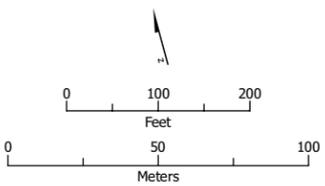
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 82**

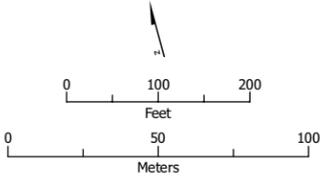
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

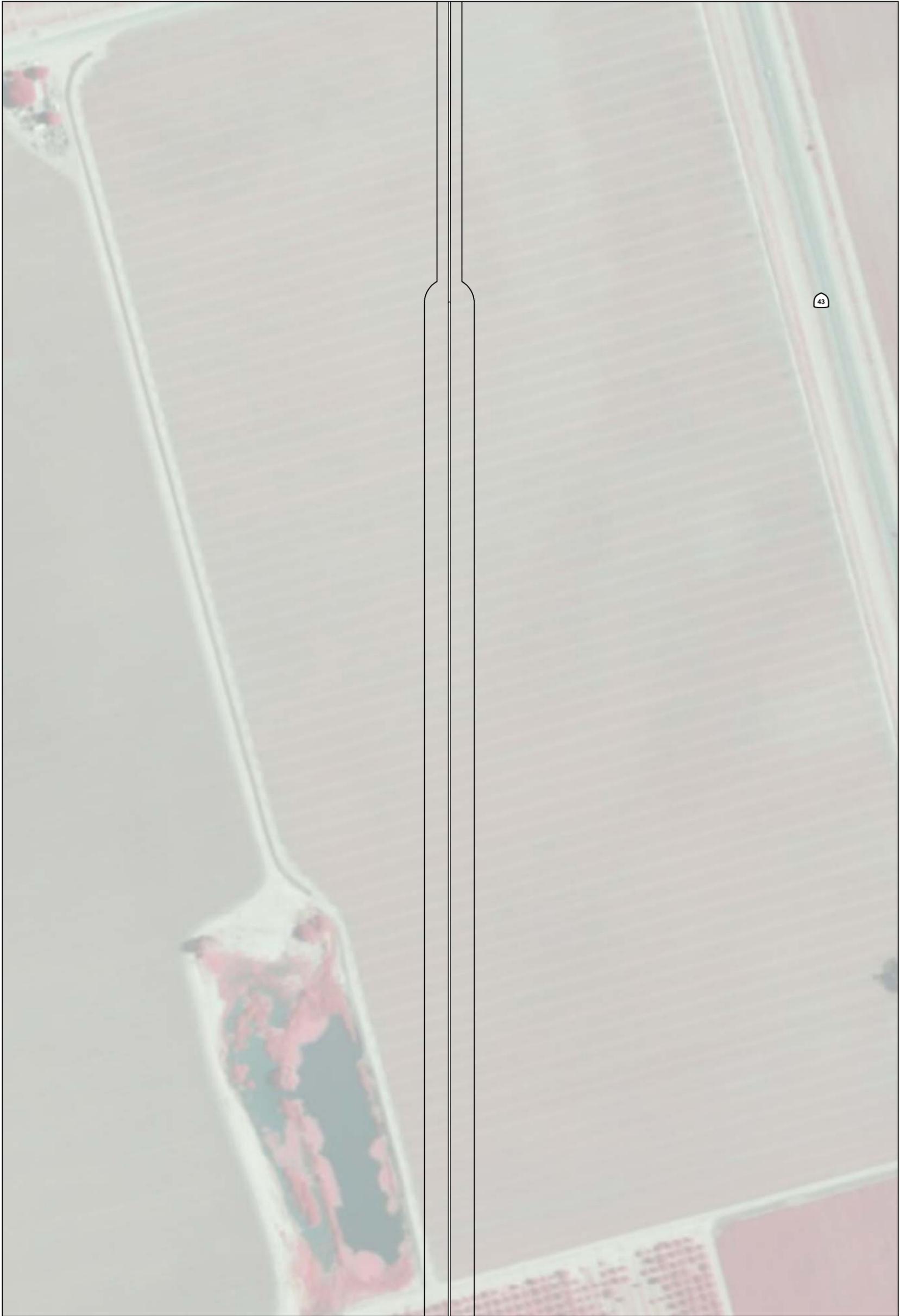
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - ▨ Vernal pool complex (Holland, 2009)\*

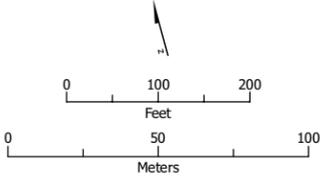
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

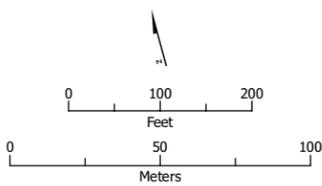
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 85**

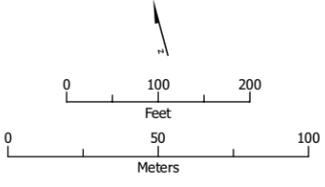
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

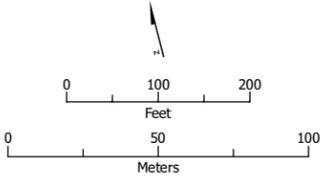
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



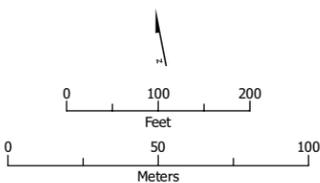
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



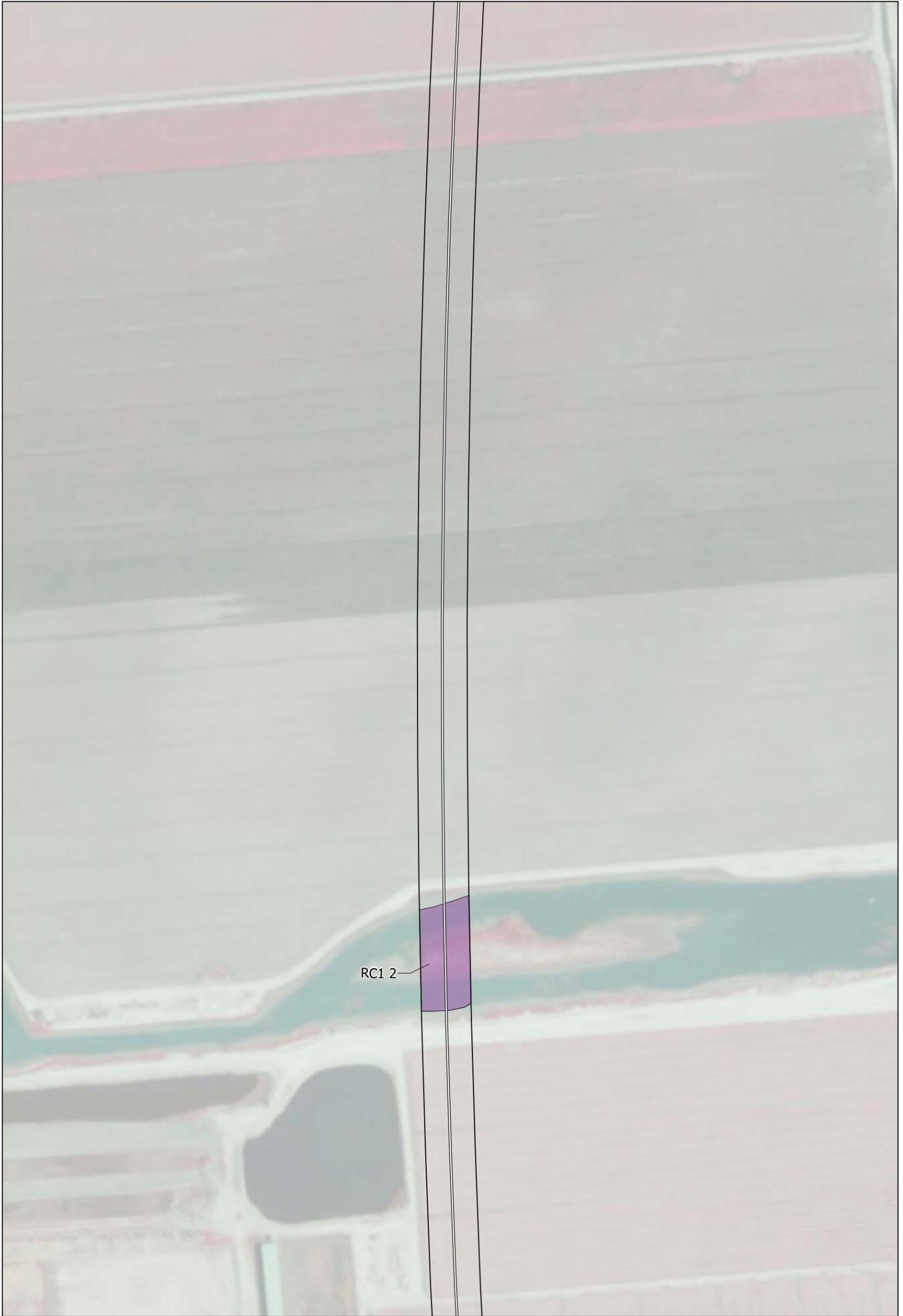
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 88**

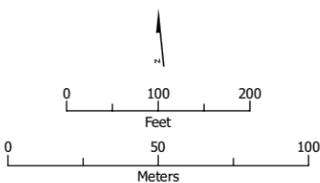
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- ▨ Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 89**

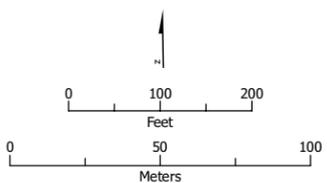
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 90**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



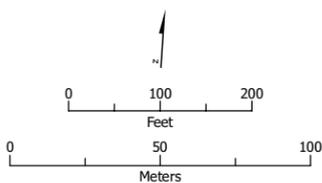
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 91**

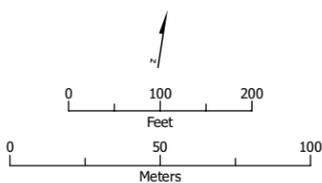
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



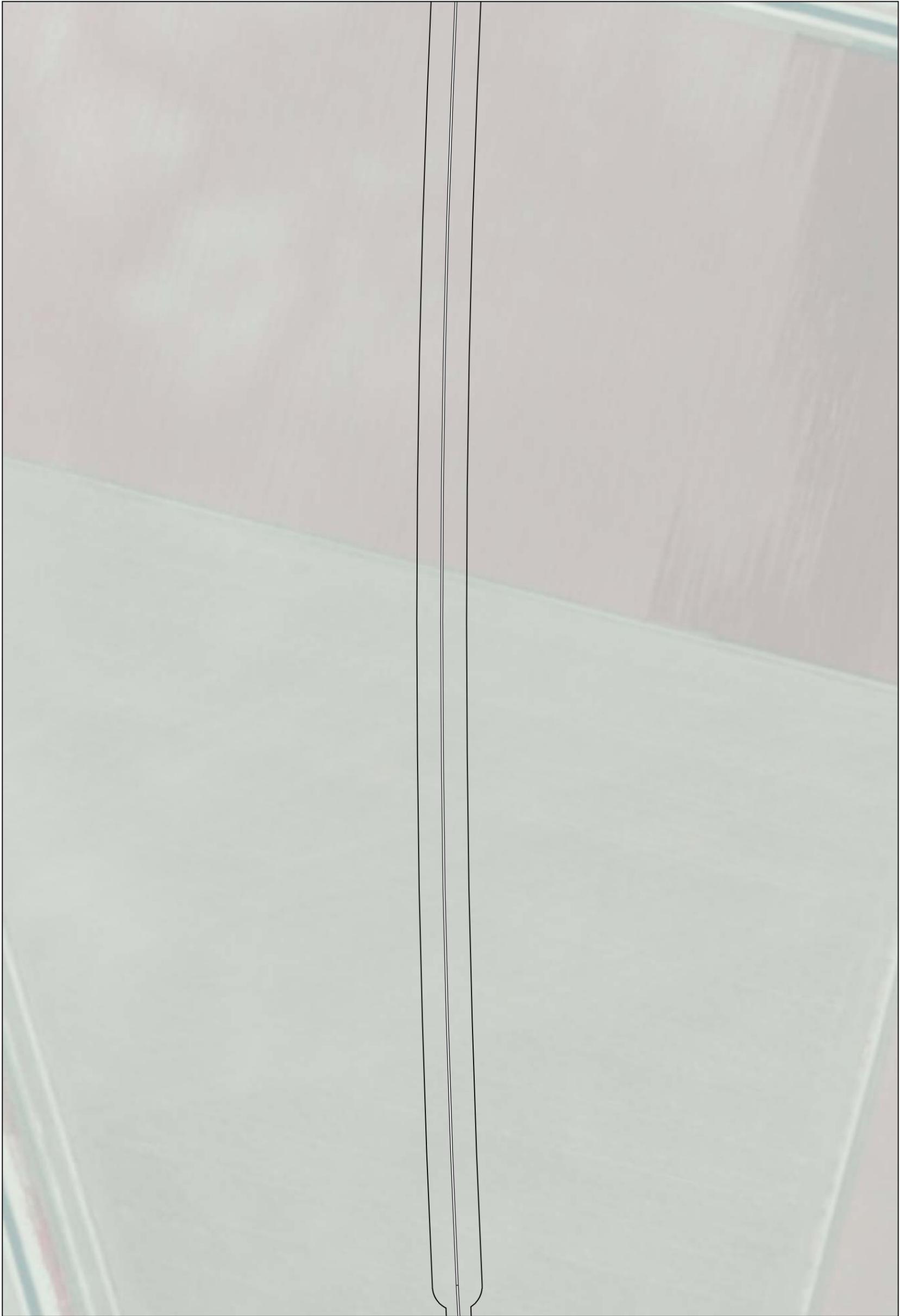
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 92**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



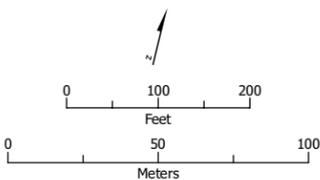
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 93**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



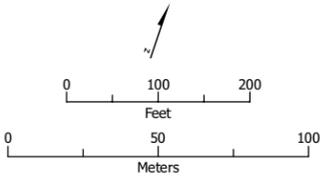
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



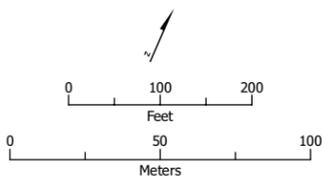
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 95**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



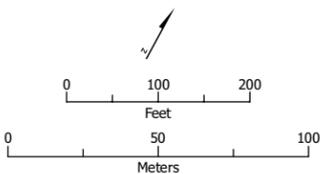
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 96**

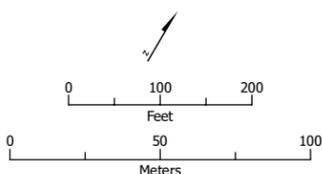
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



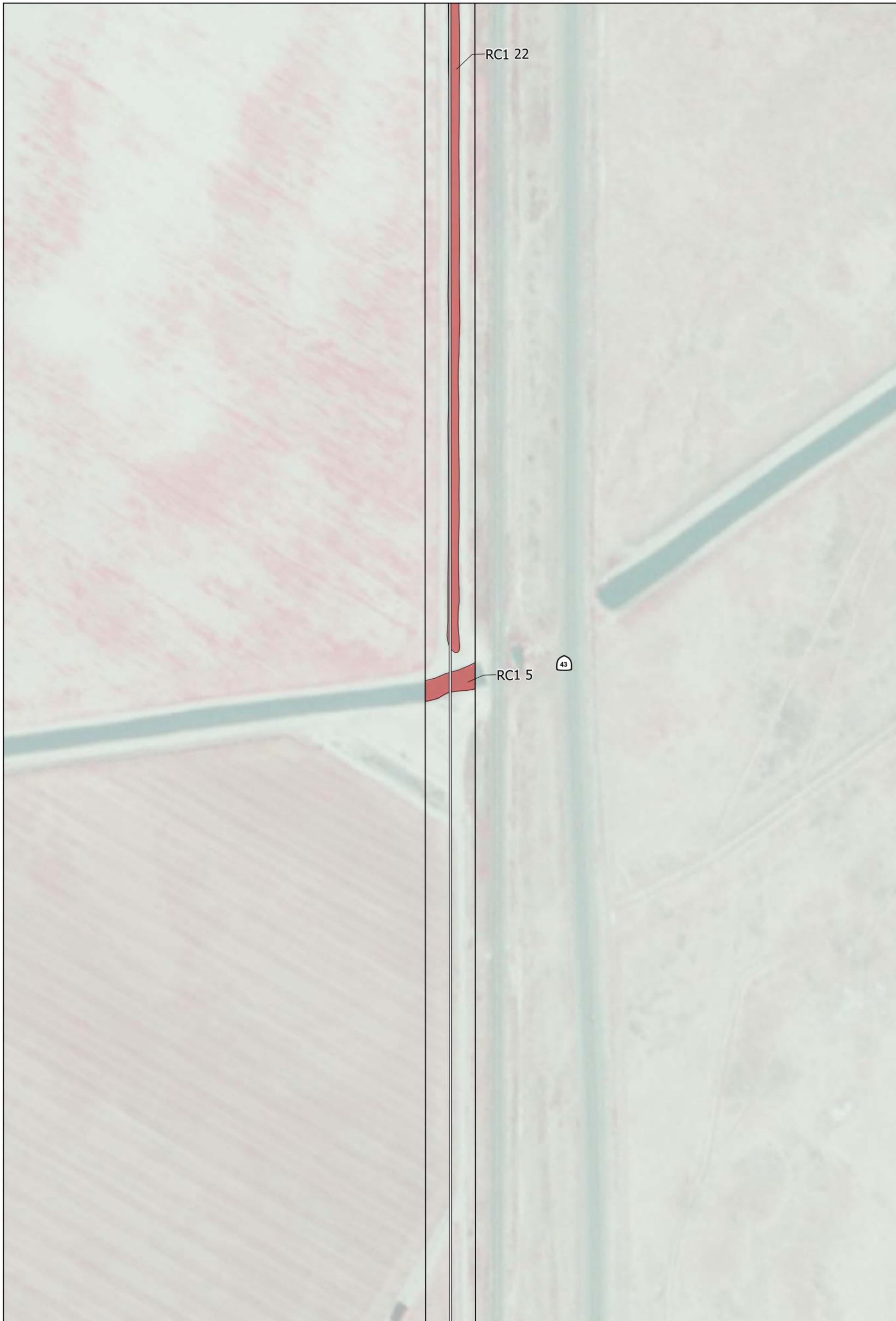
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 97**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



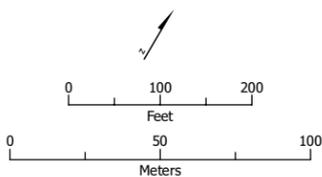
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 98**

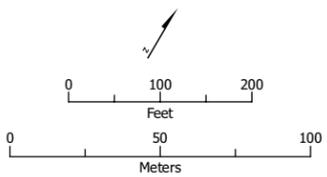
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 99**

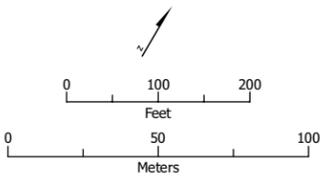
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

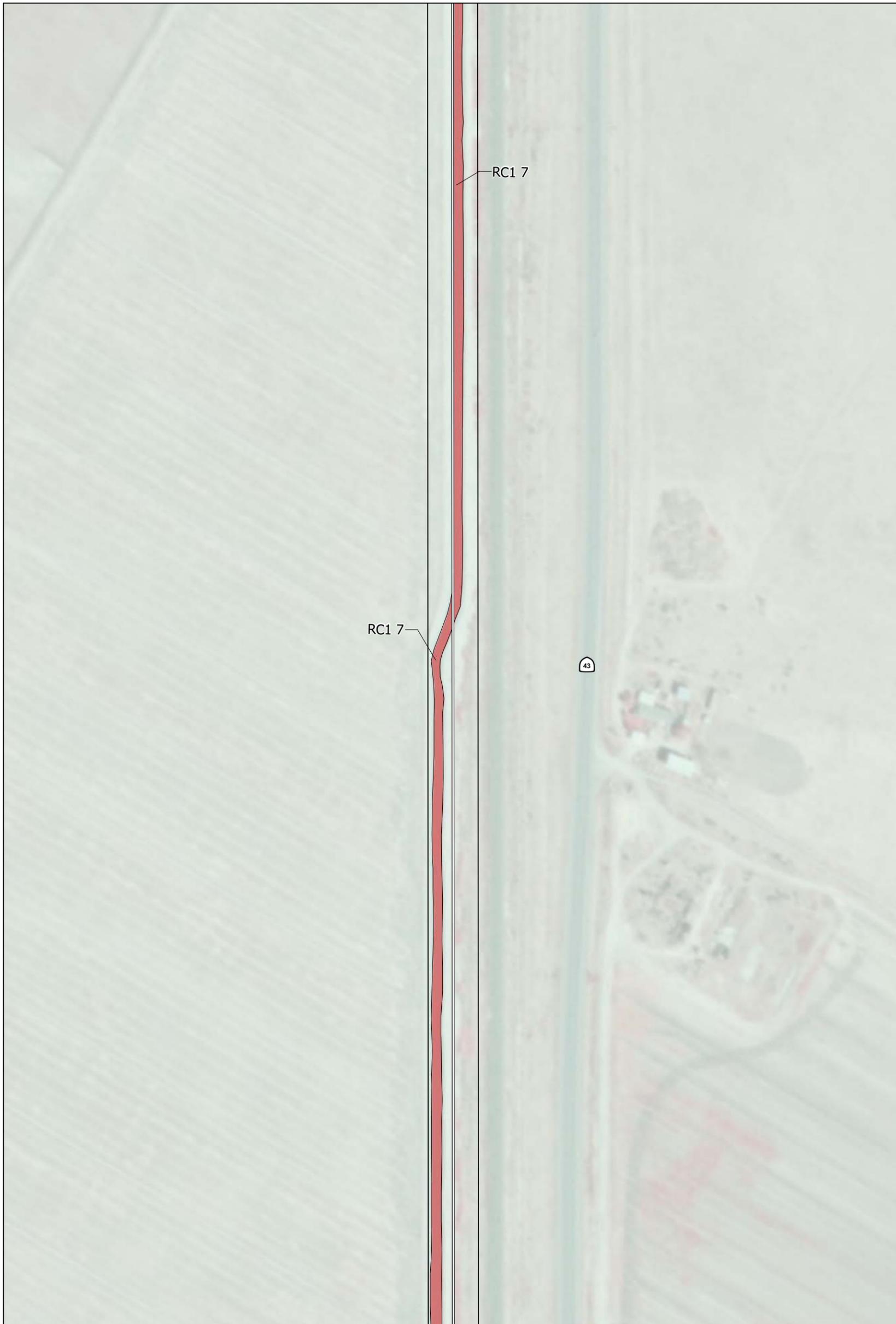
Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

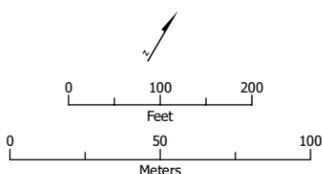
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 101**

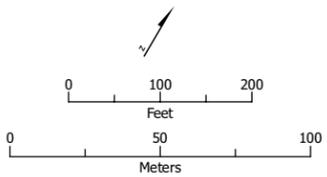
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 102**

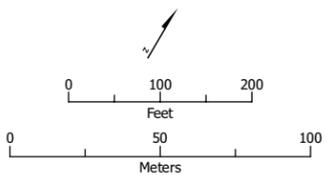
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 103**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



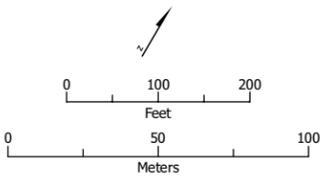
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 104**

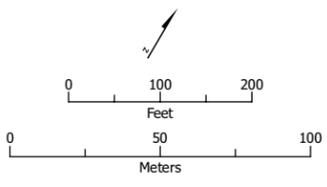
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 105**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



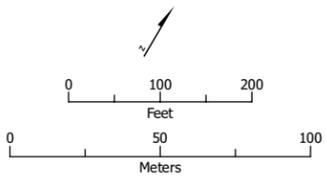
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

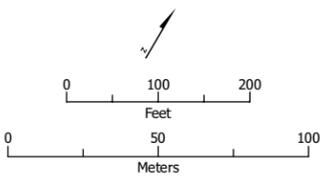
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 107**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

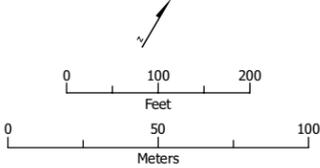


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

February 10, 2011

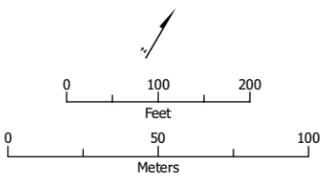


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

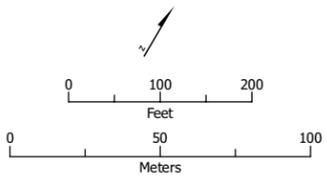
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

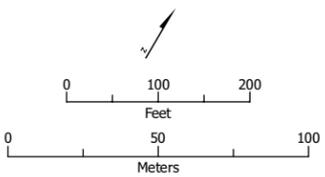
**Appendix E-1c**  
**Sheet 110**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 111**

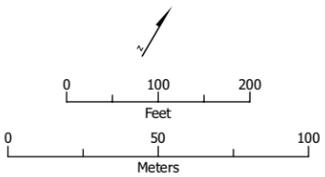
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 112**

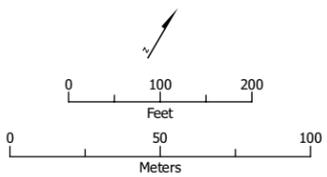
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 113**

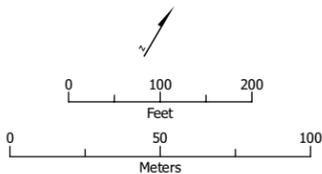
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 114**

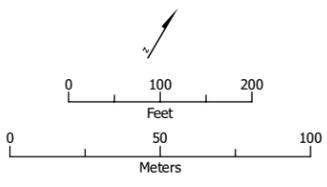
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

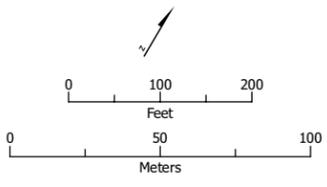
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

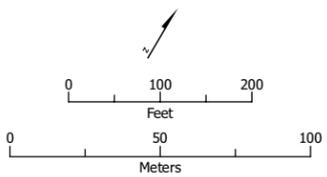


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 117**

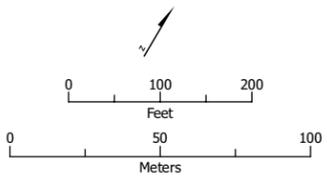
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

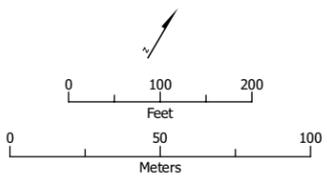
**Appendix E-1c  
 Sheet 118**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 119**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



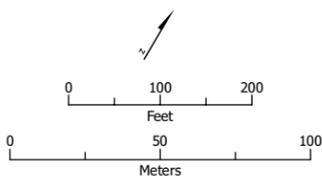
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 120**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



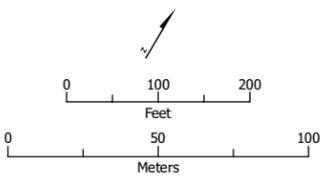
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 121**

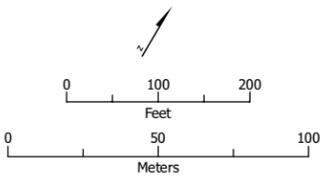
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 122**

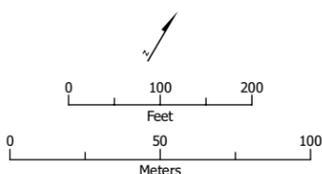
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 123**

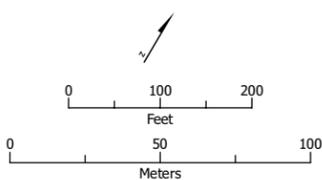
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 124**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



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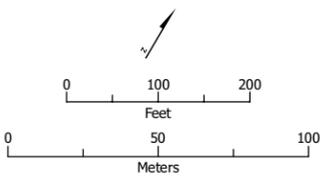
Angela Dr

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PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c**  
**Sheet 125**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



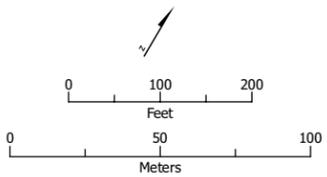
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



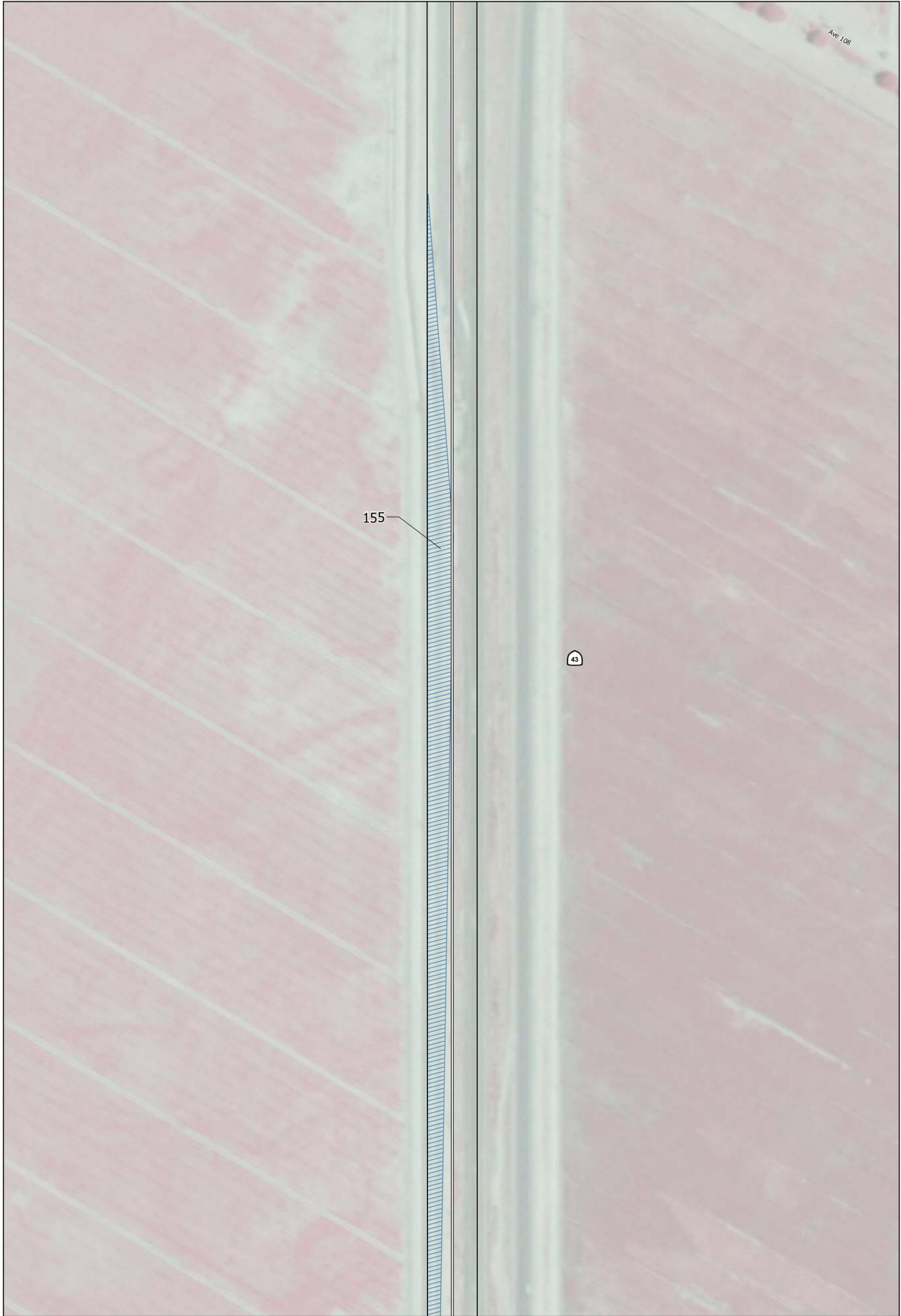
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 126**

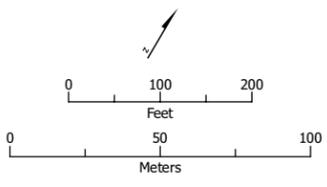
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

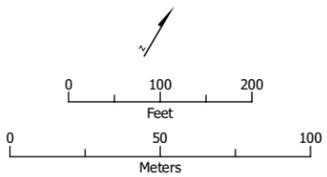
**Appendix E-1c**  
**Sheet 127**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 128**

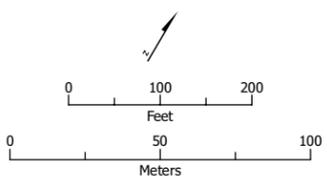
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 129**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



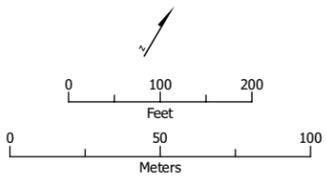
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 130**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



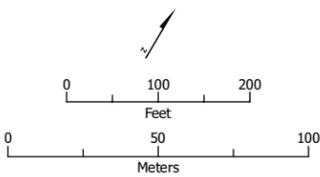
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 131**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



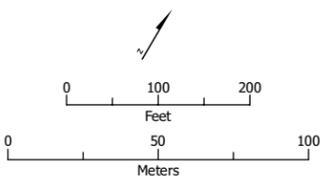
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 132**

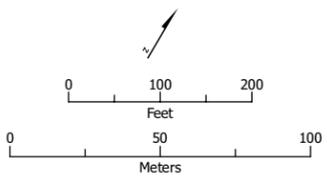
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 133**

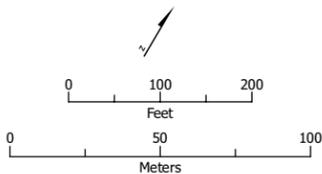
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



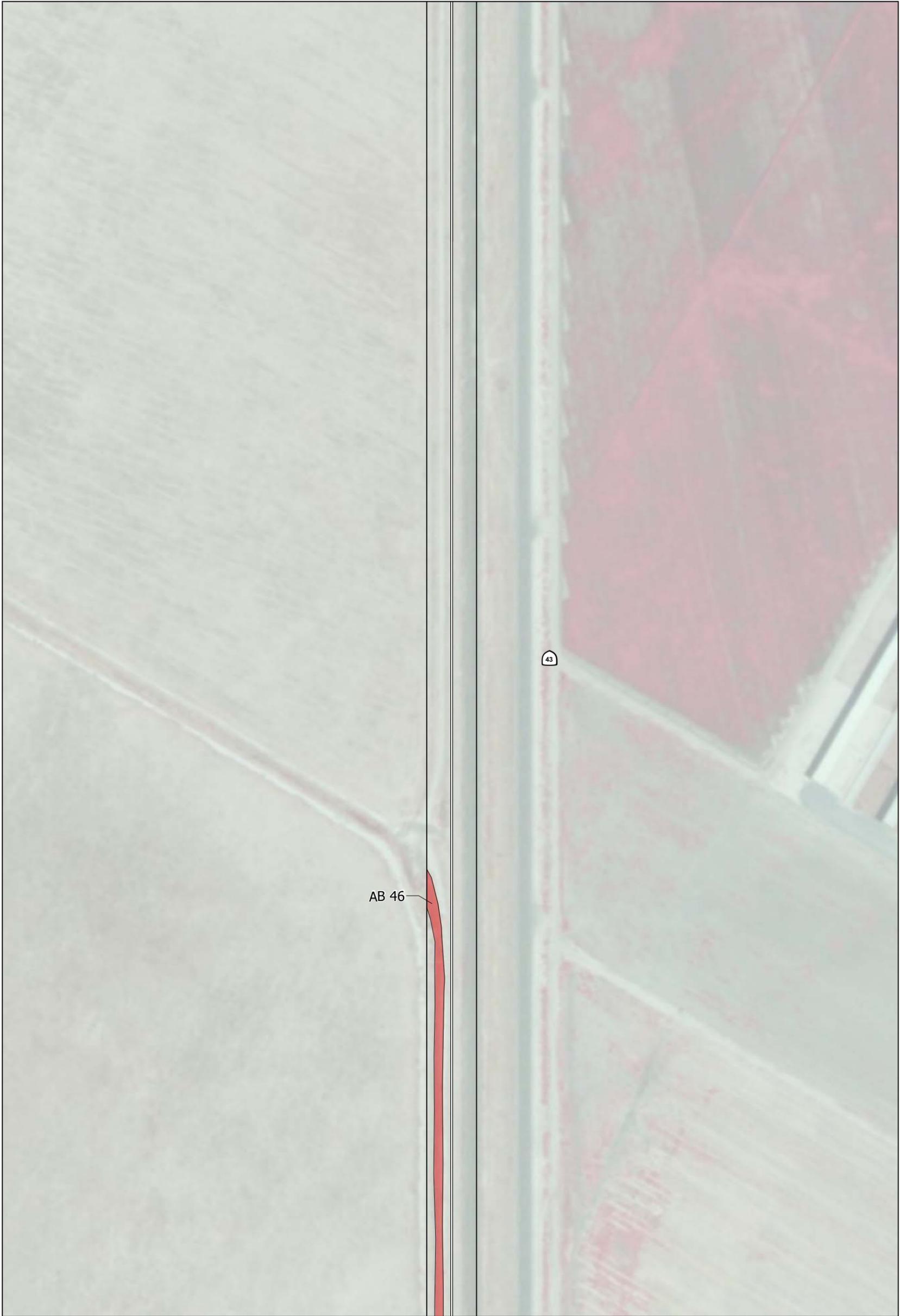
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 134**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

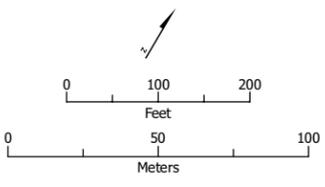


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005

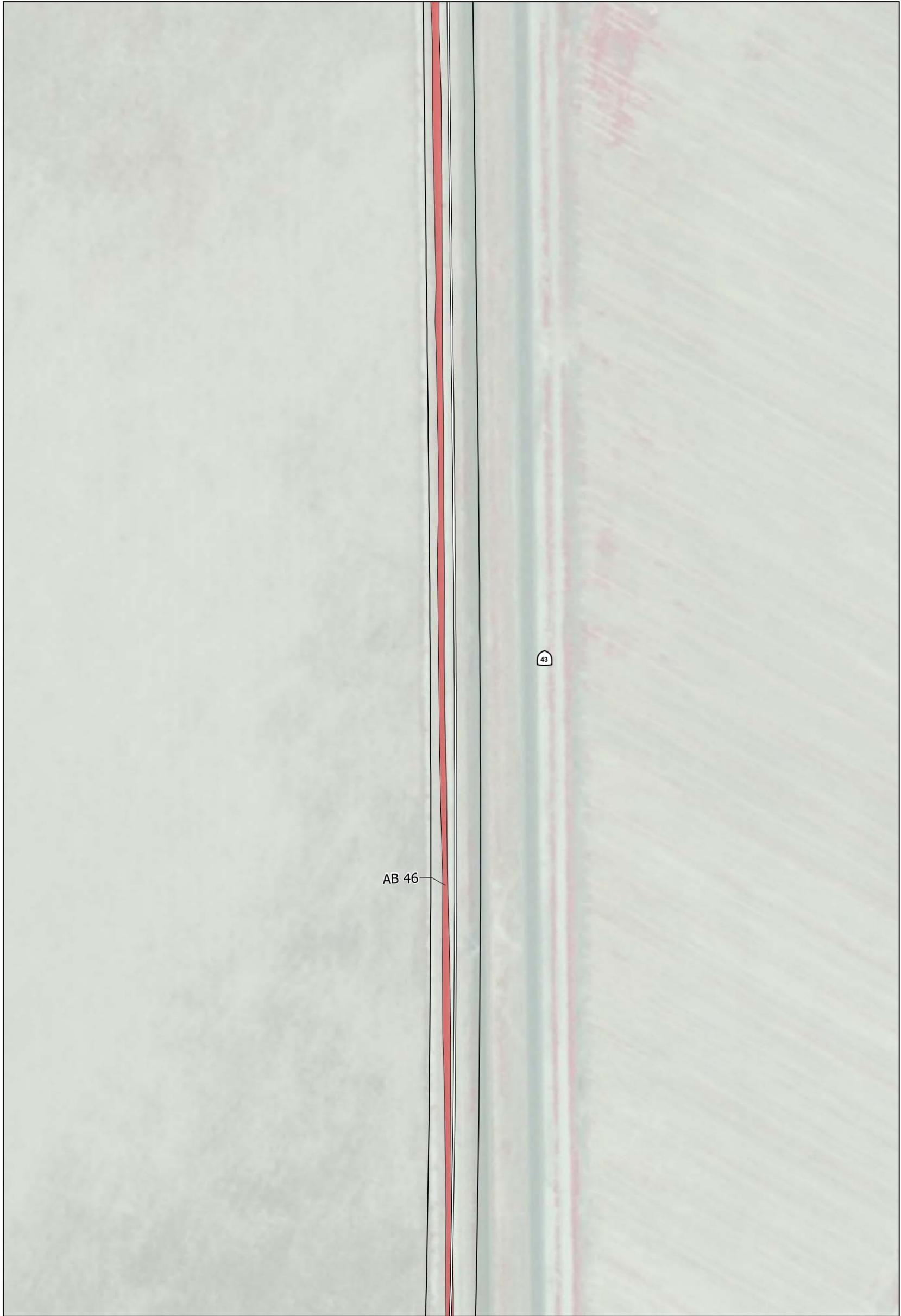
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 135**  
 Estimated special aquatic resources located  
 within the BNSF avoidance alternative alignment area



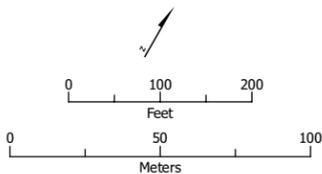
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 136**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



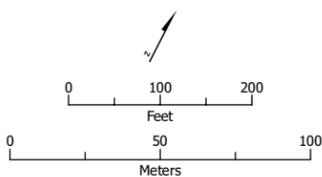
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 137**

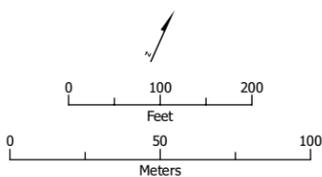
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 138**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



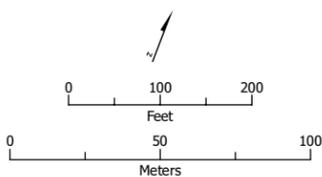
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 139**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

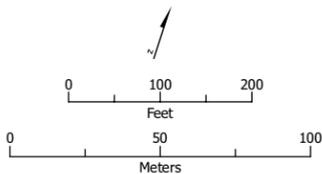
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources  
with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 140**

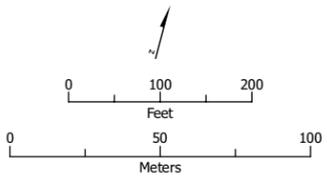
Estimated special aquatic resources located  
within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



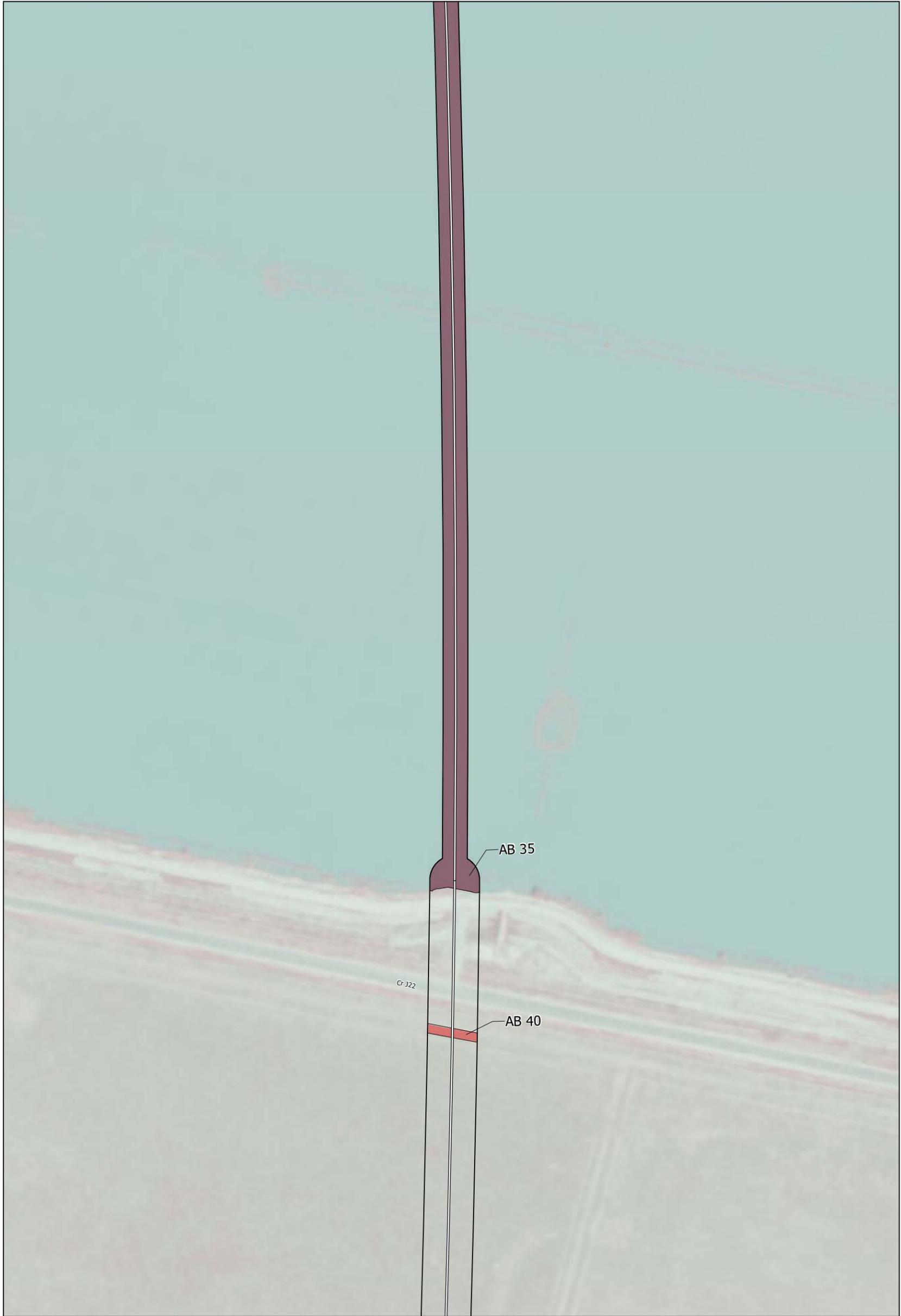
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 141**

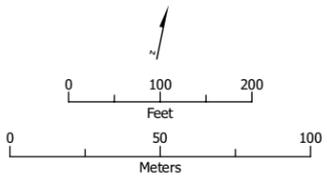
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



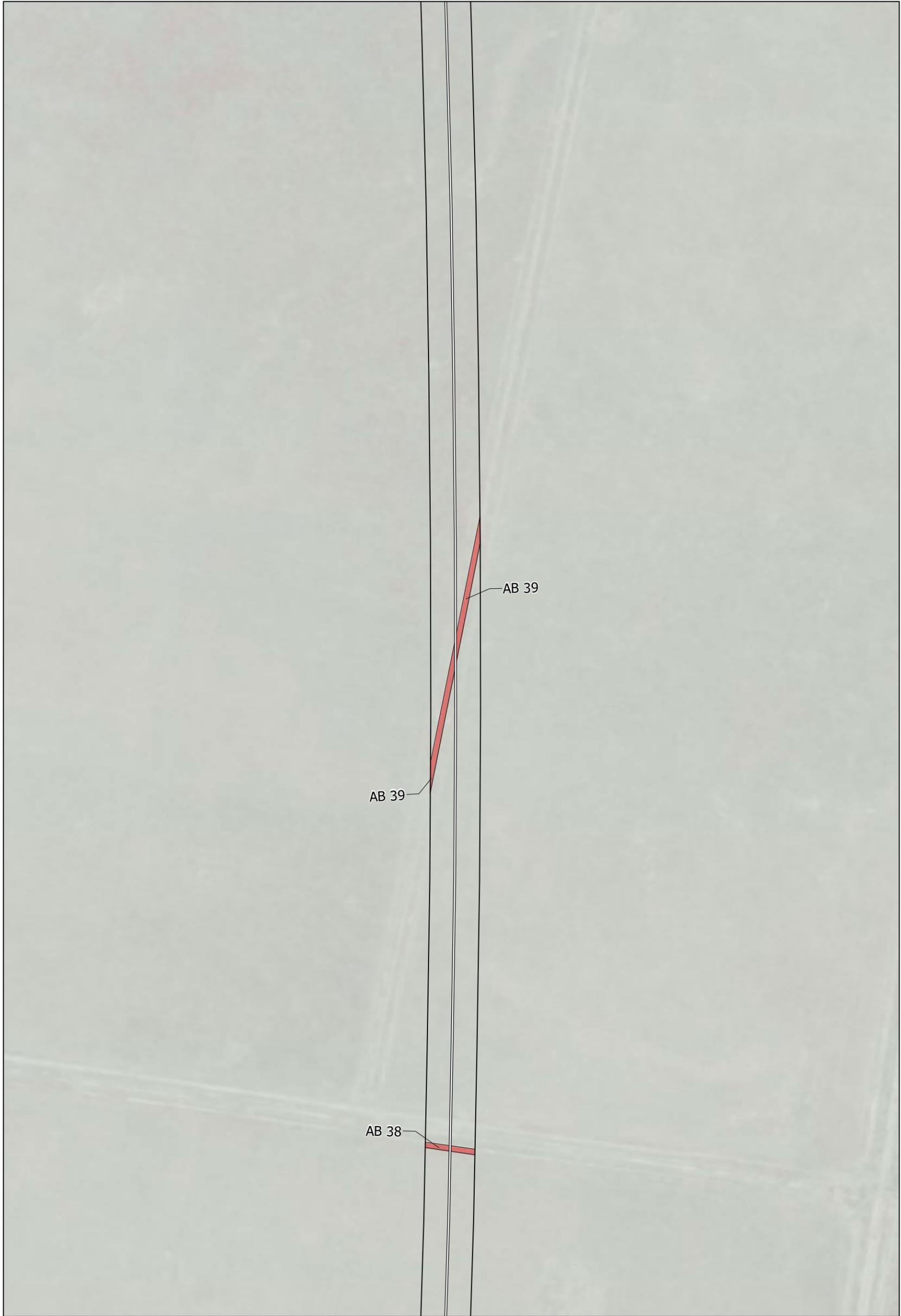
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 142**

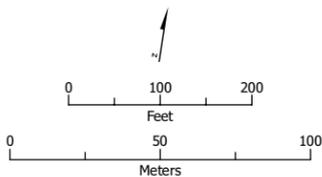
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
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**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 143**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



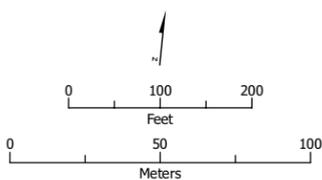
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 144**

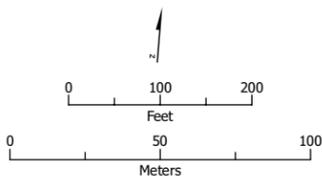
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 145**

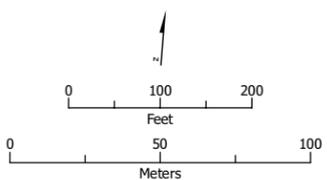
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 146**

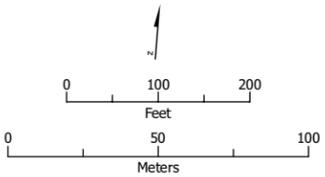
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 147**

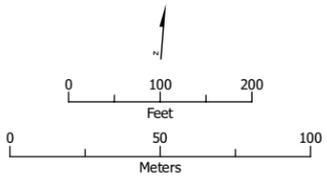
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



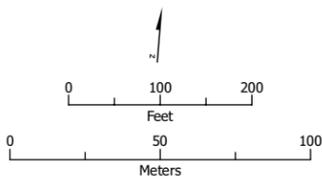
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 149**

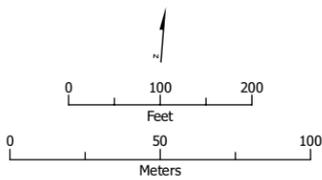
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

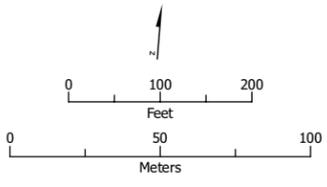
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

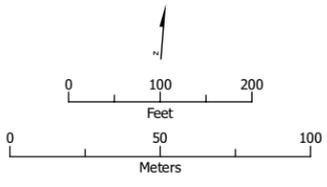
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

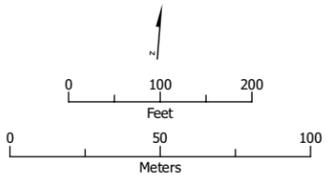
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 153**

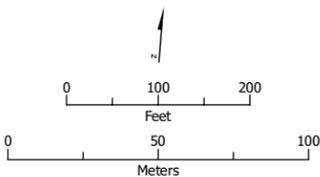
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 154**

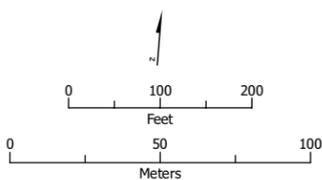
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

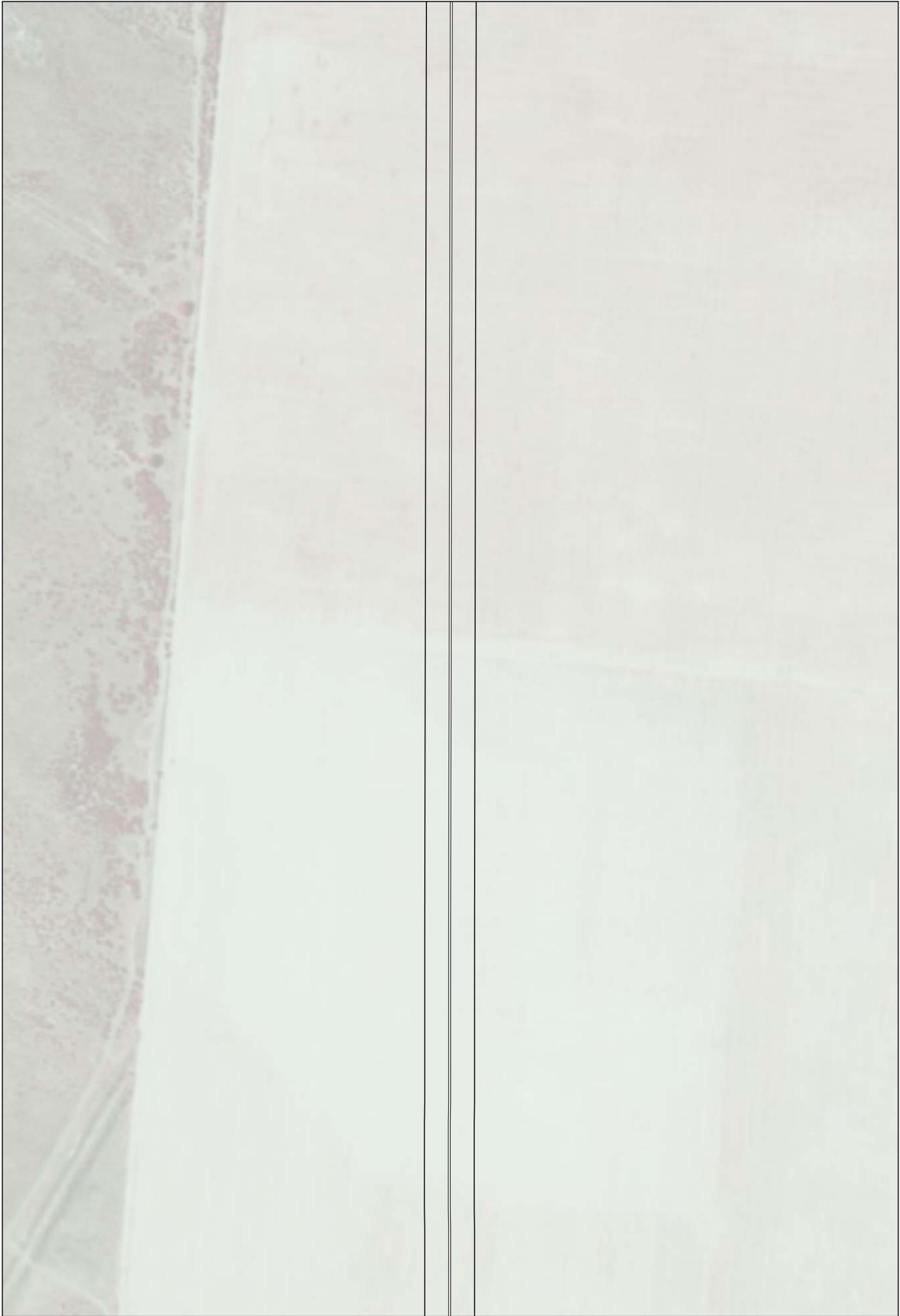
Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

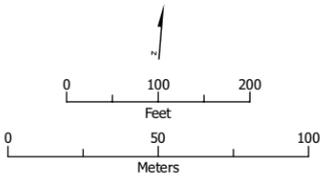


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

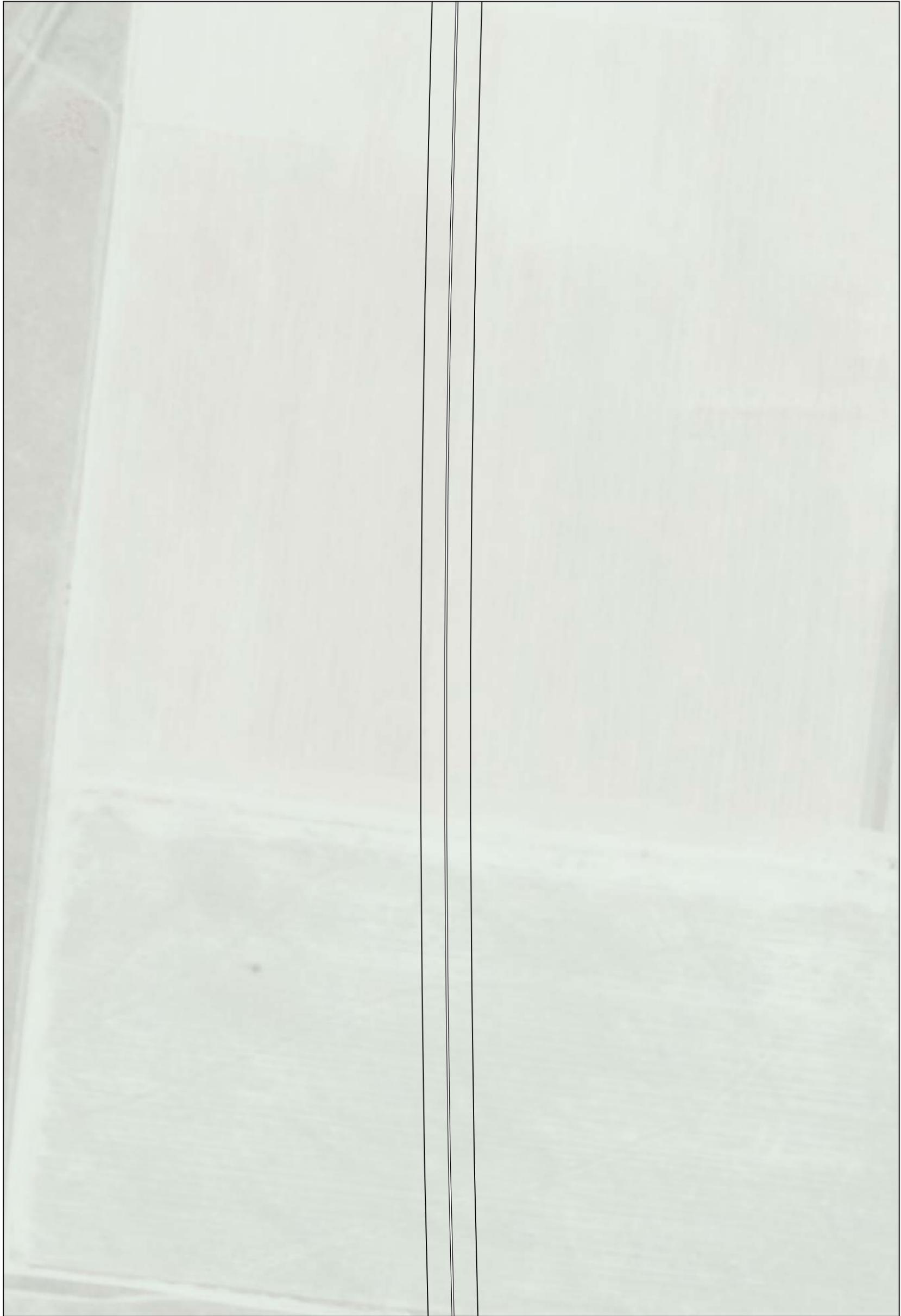
Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



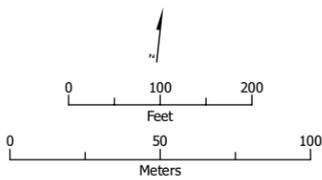
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



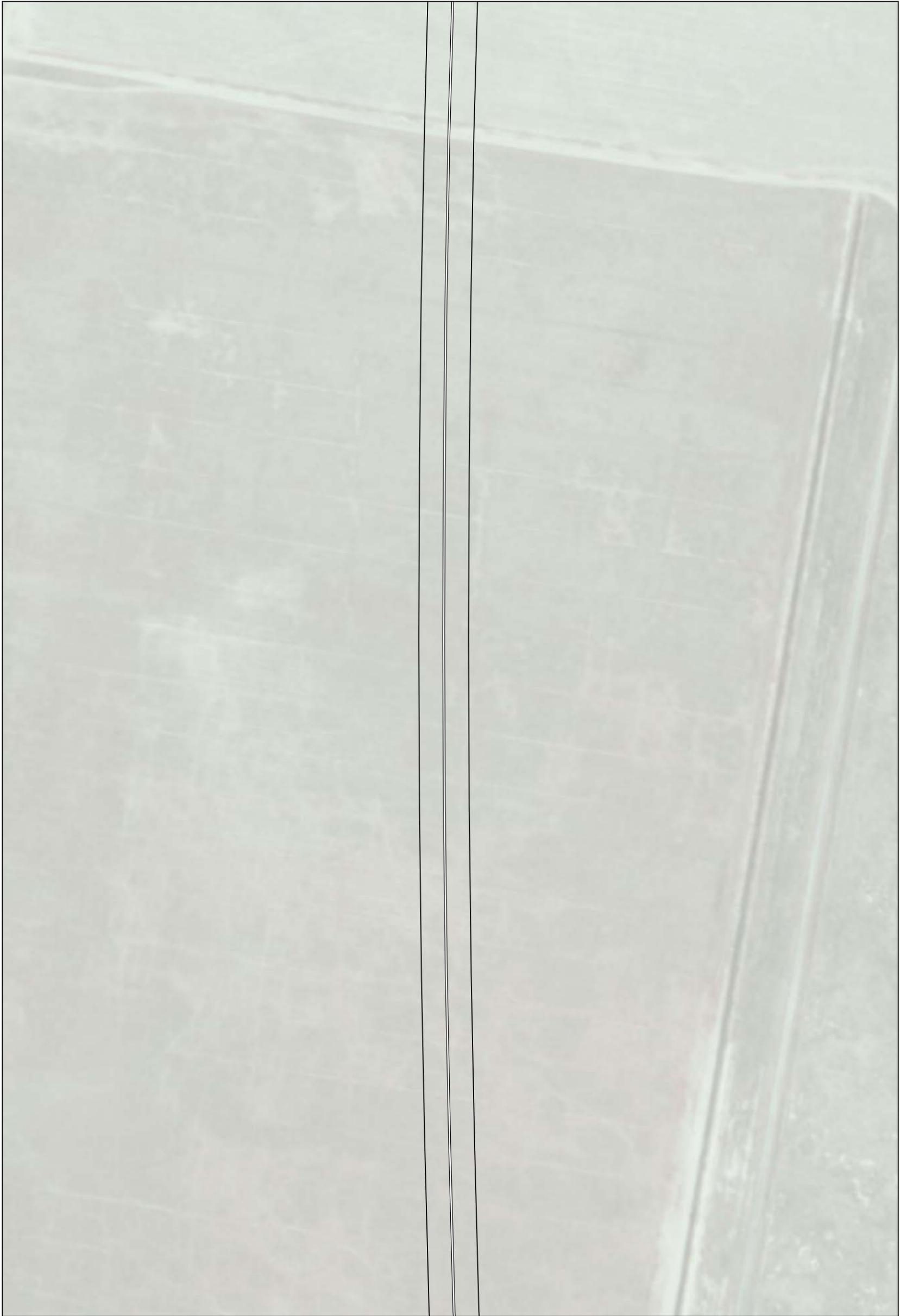
**Special aquatic resources  
with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 157**

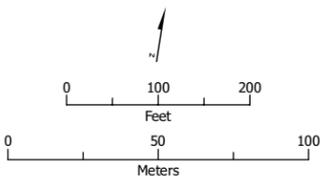
Estimated special aquatic resources located  
within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

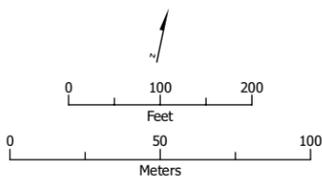
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 159**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

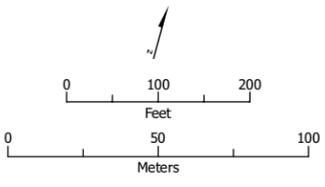


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

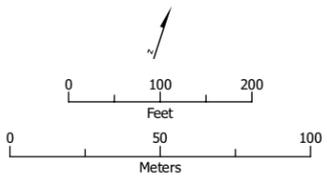
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

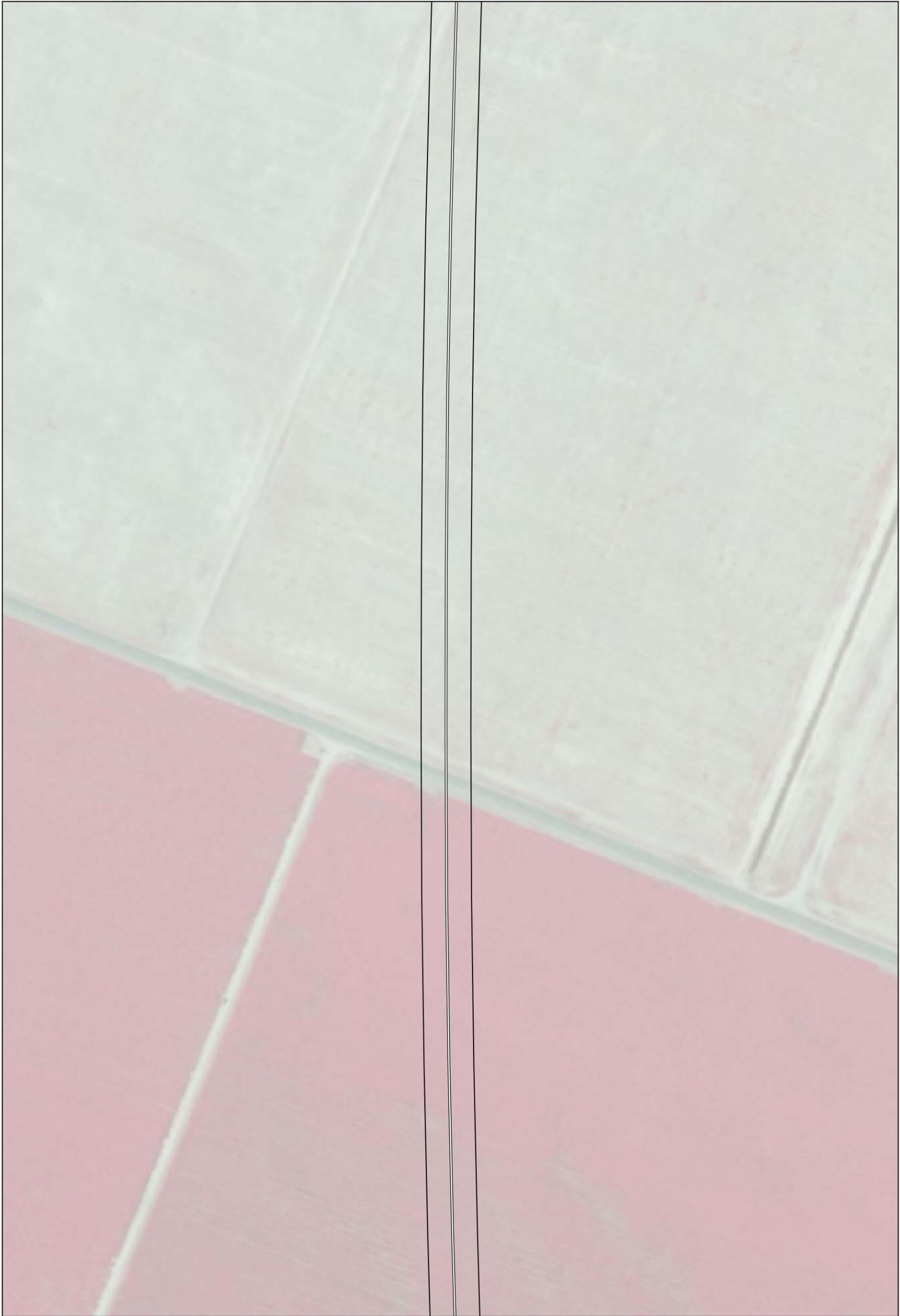
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

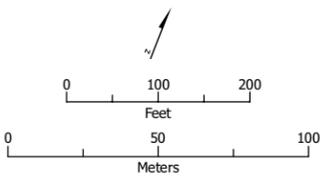
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



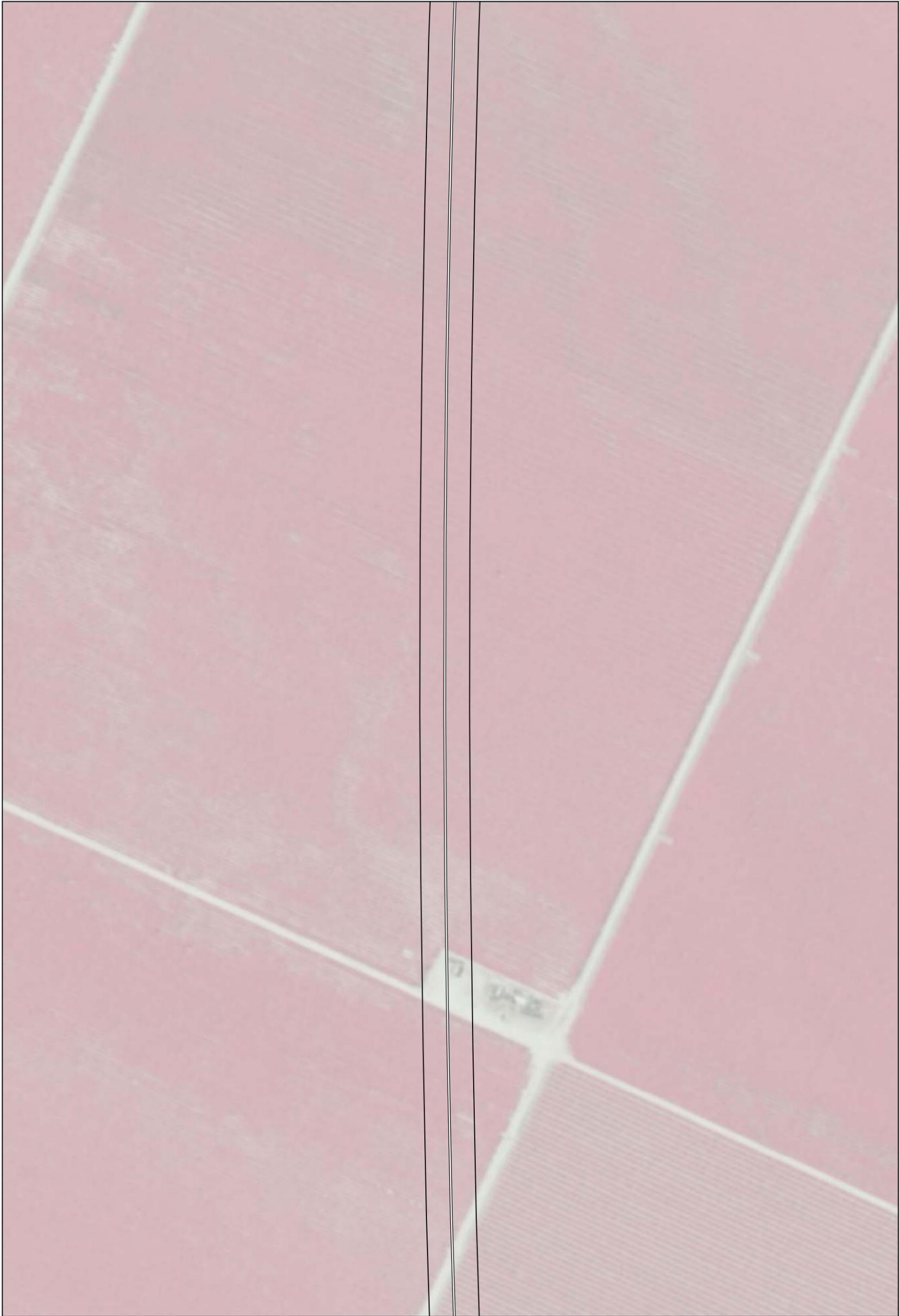
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 162**

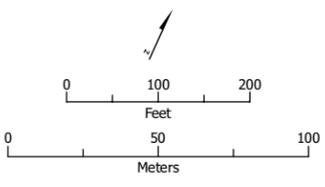
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



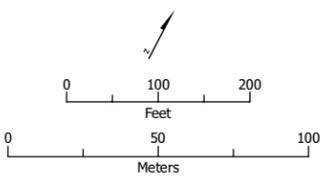
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

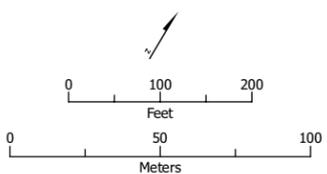
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 165**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



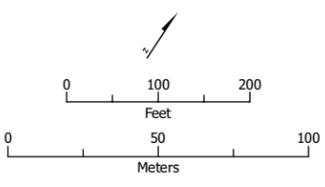
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

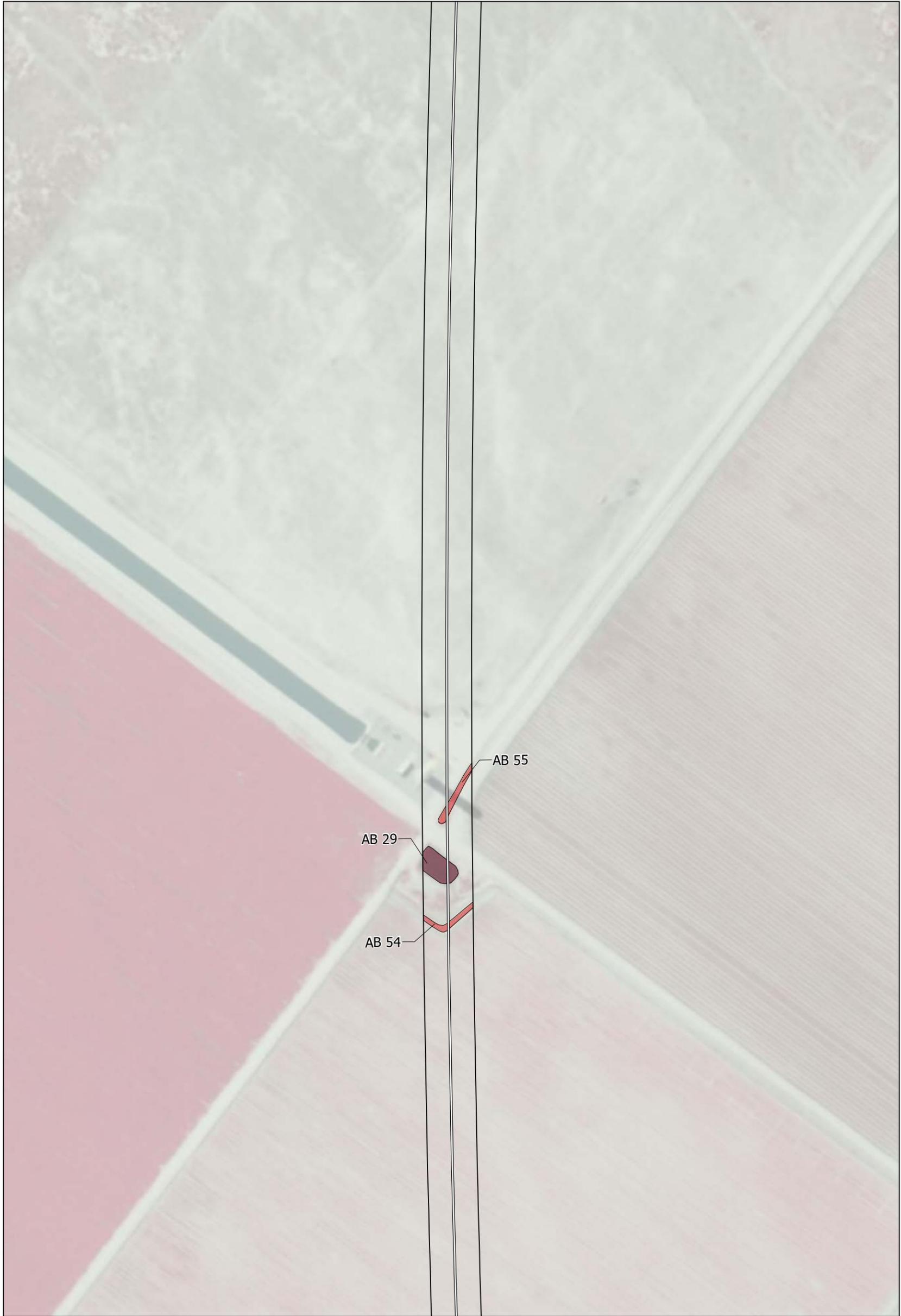
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

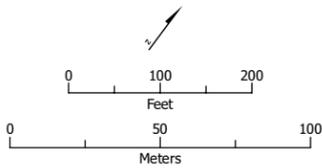
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c Sheet 167**

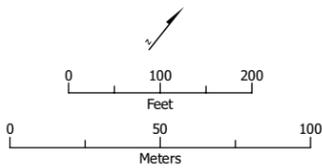
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 168**

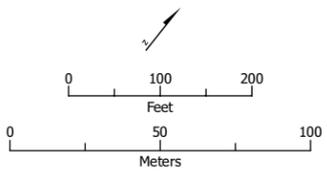
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 169**

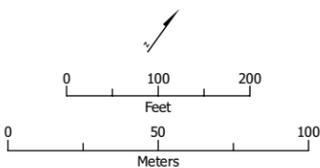
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



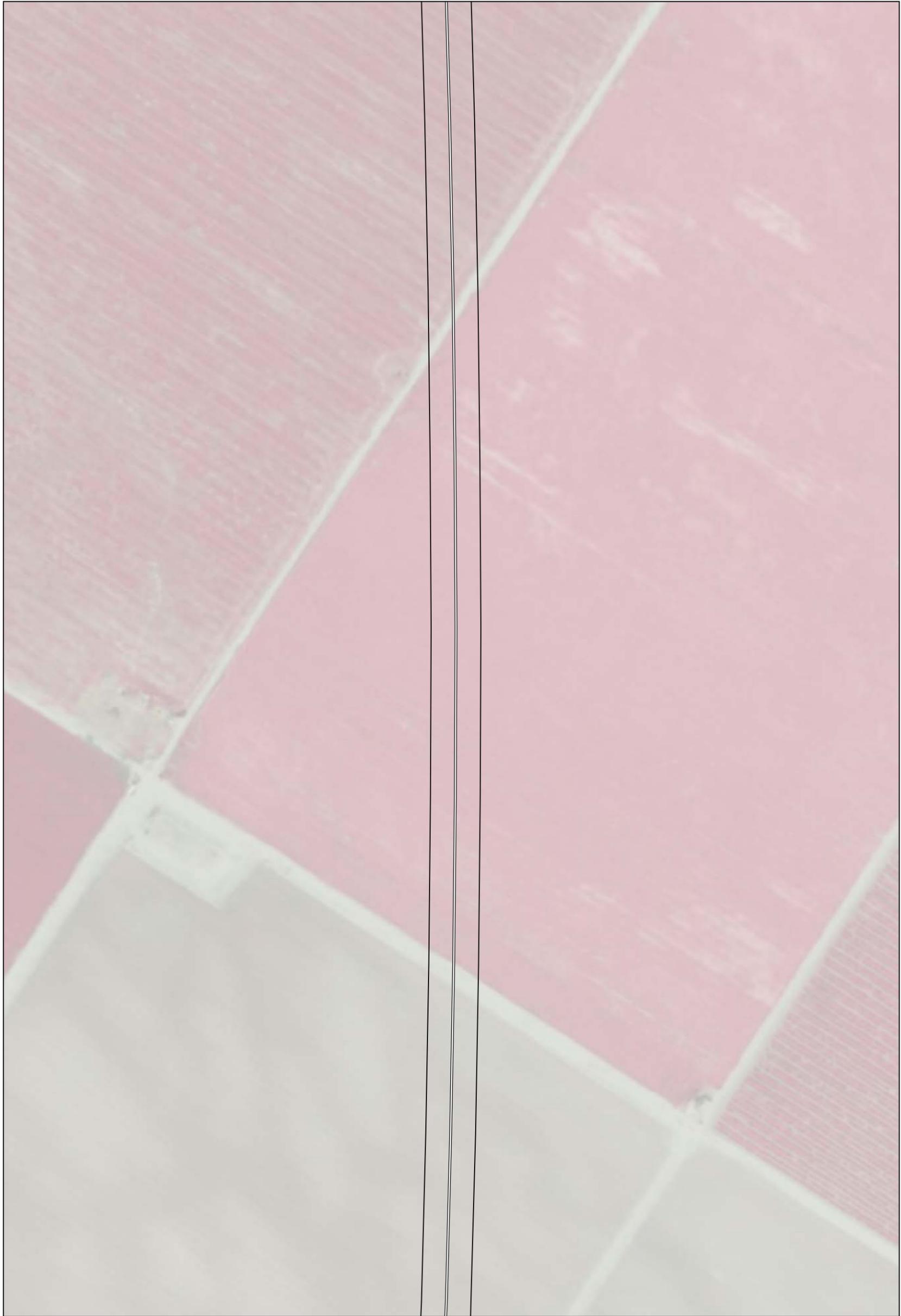
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 170**

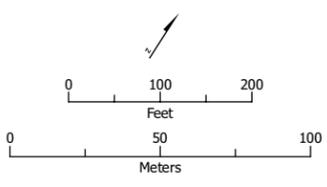
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



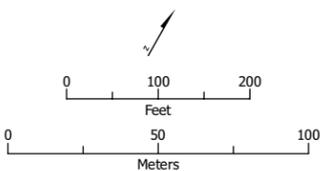
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



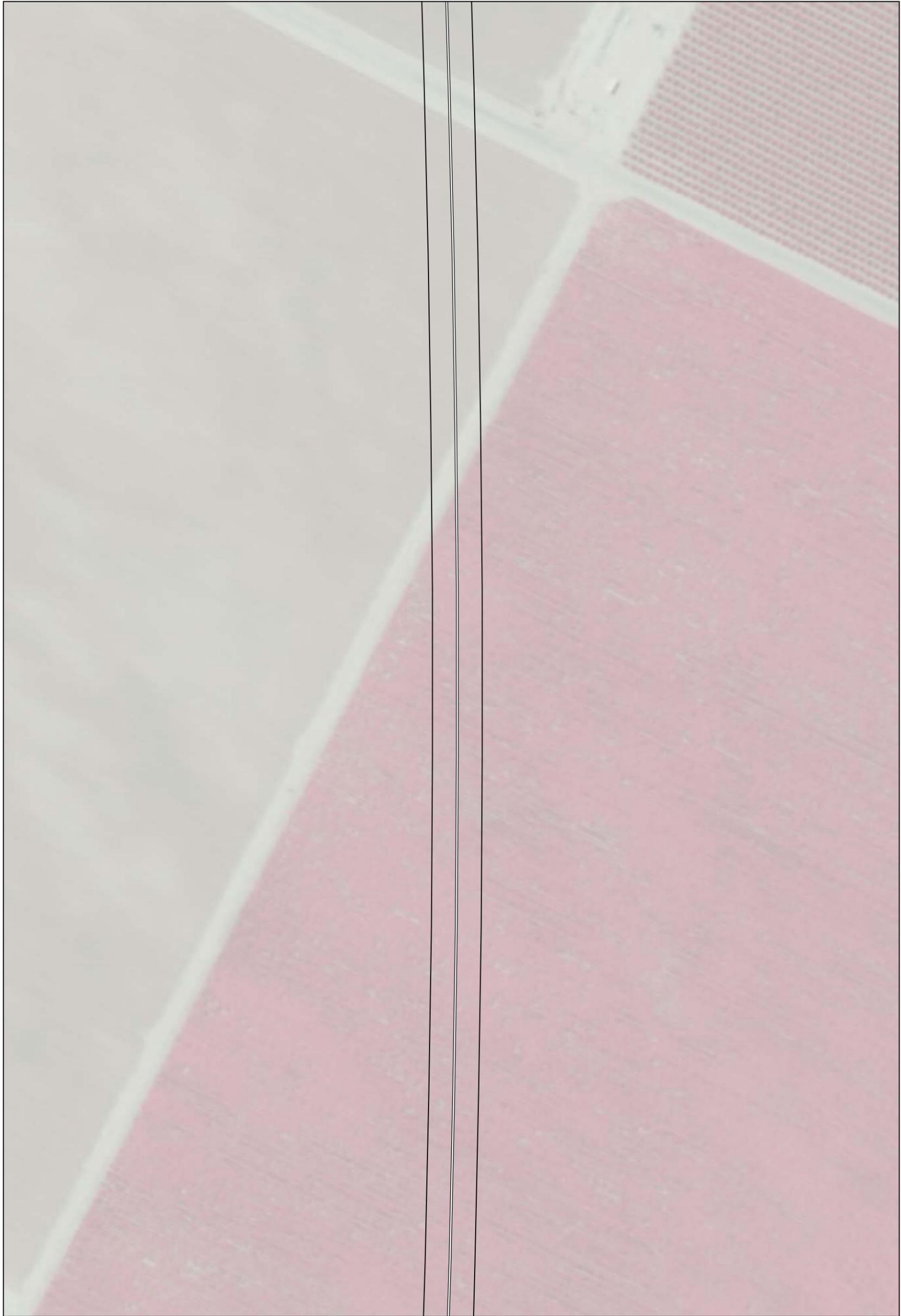
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 172**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



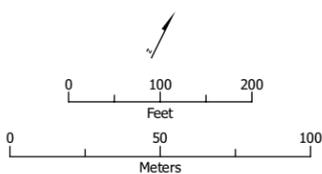
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



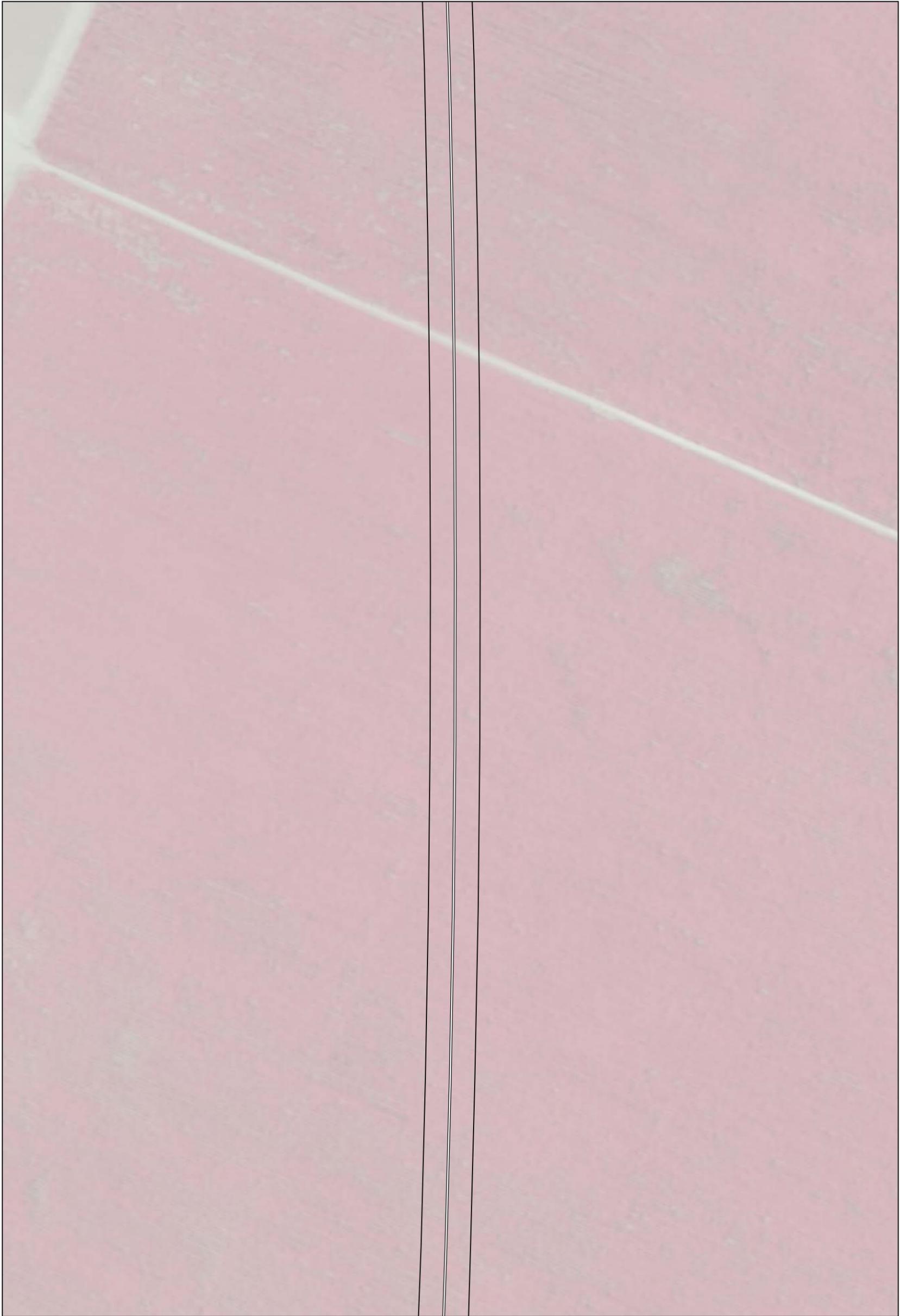
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 173**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



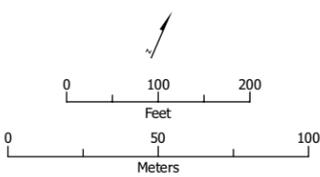
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



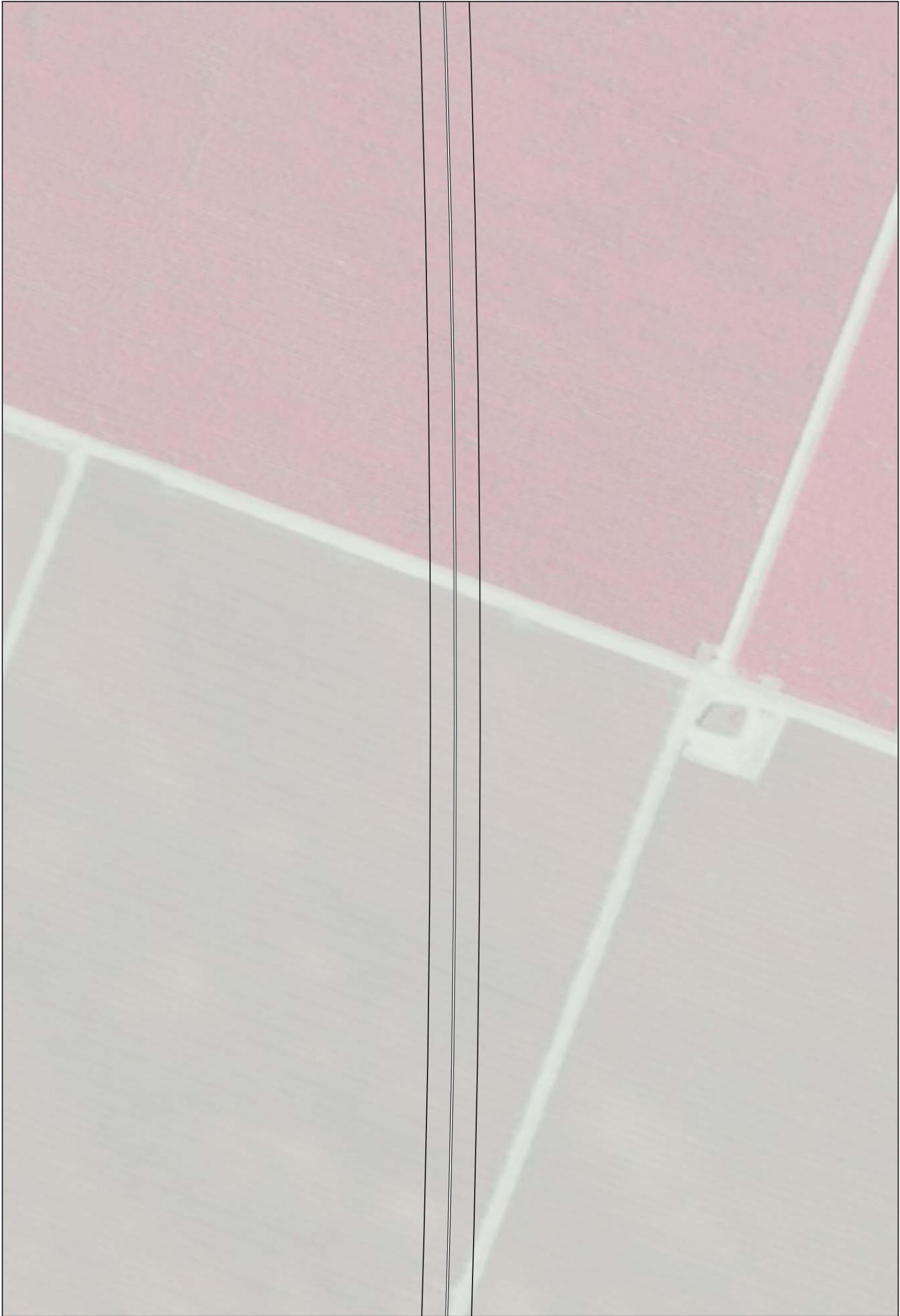
**Special aquatic resources  
with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 174**

Estimated special aquatic resources located  
within the BNSF avoidance alternative alignment area



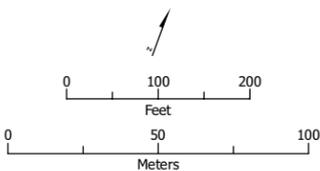
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 175**

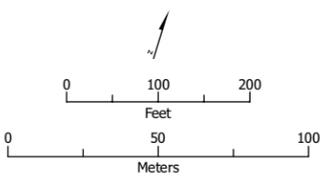
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

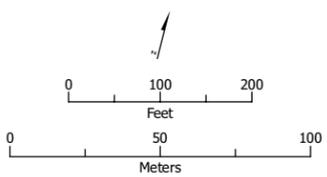
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 177**

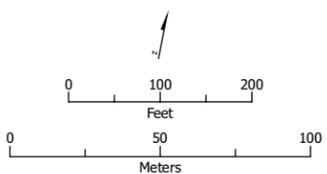
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

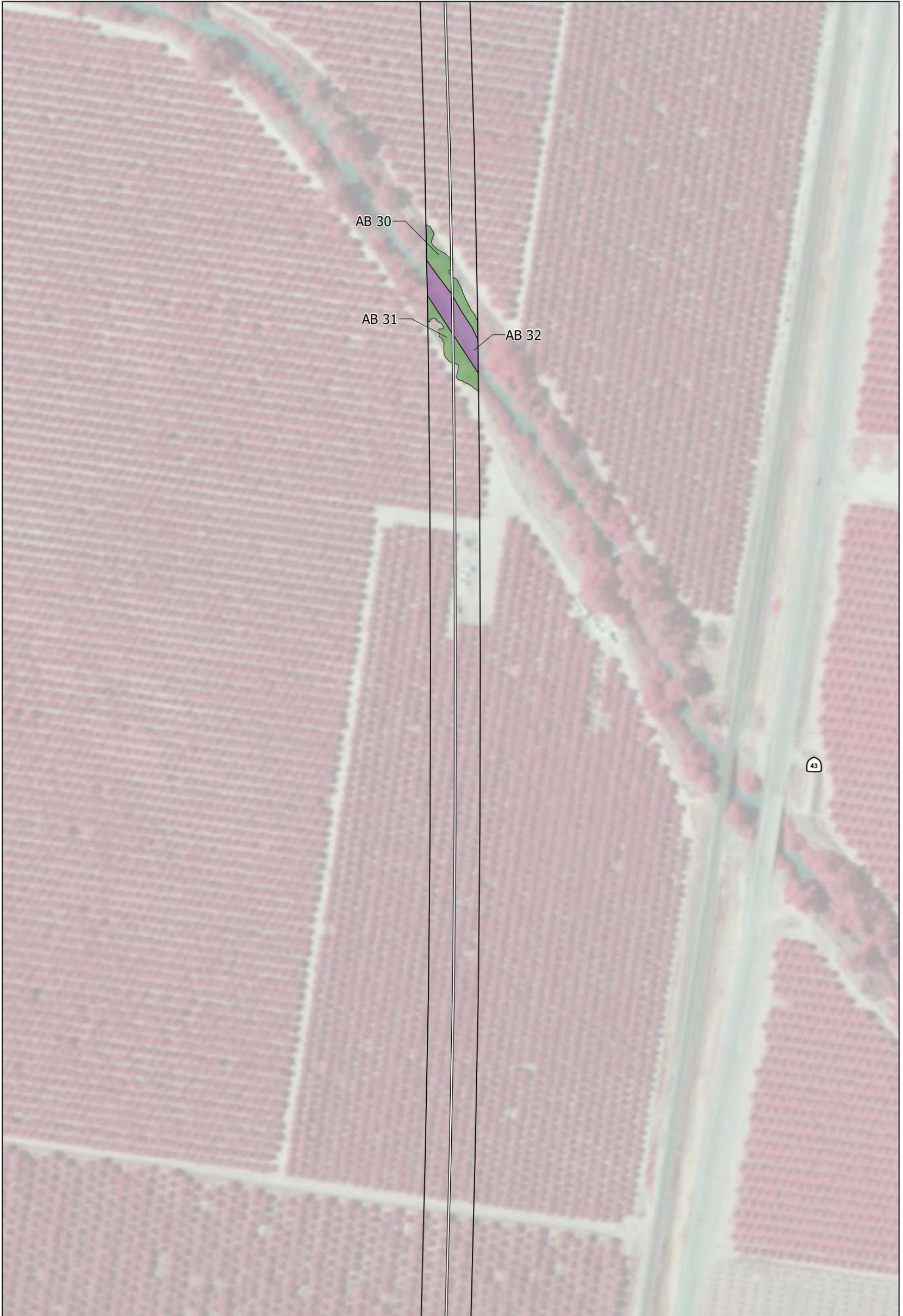


- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 178**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

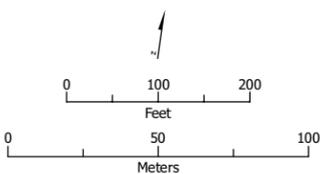
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 179**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



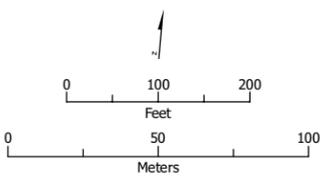
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



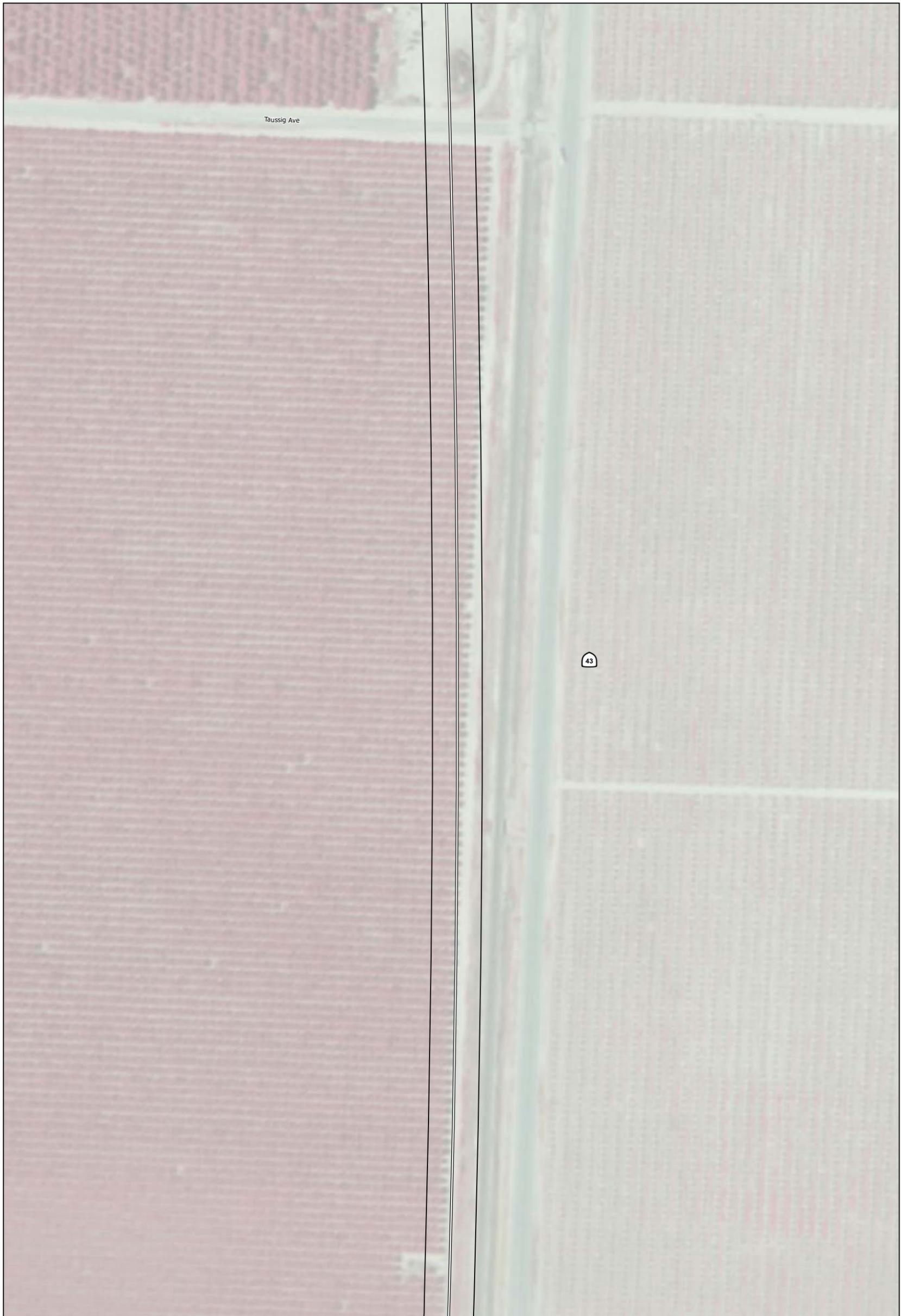
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 180**

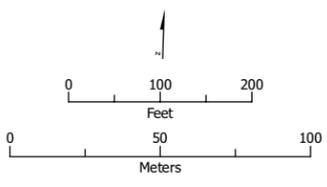
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

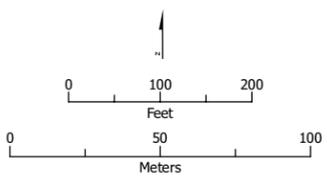
- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

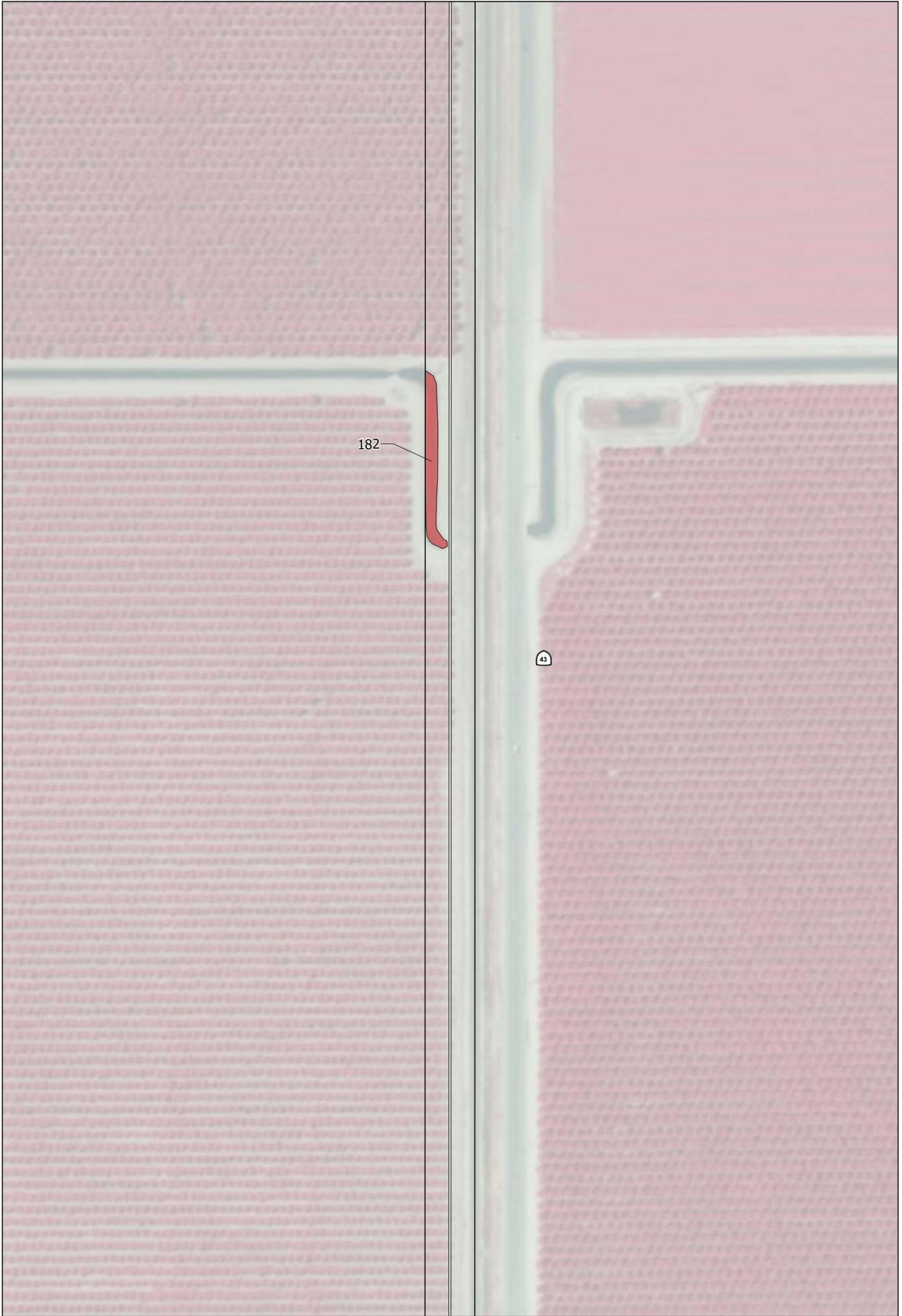
Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 182**  
 Estimated special aquatic resources located  
 within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

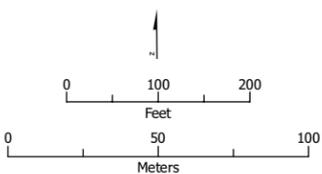
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

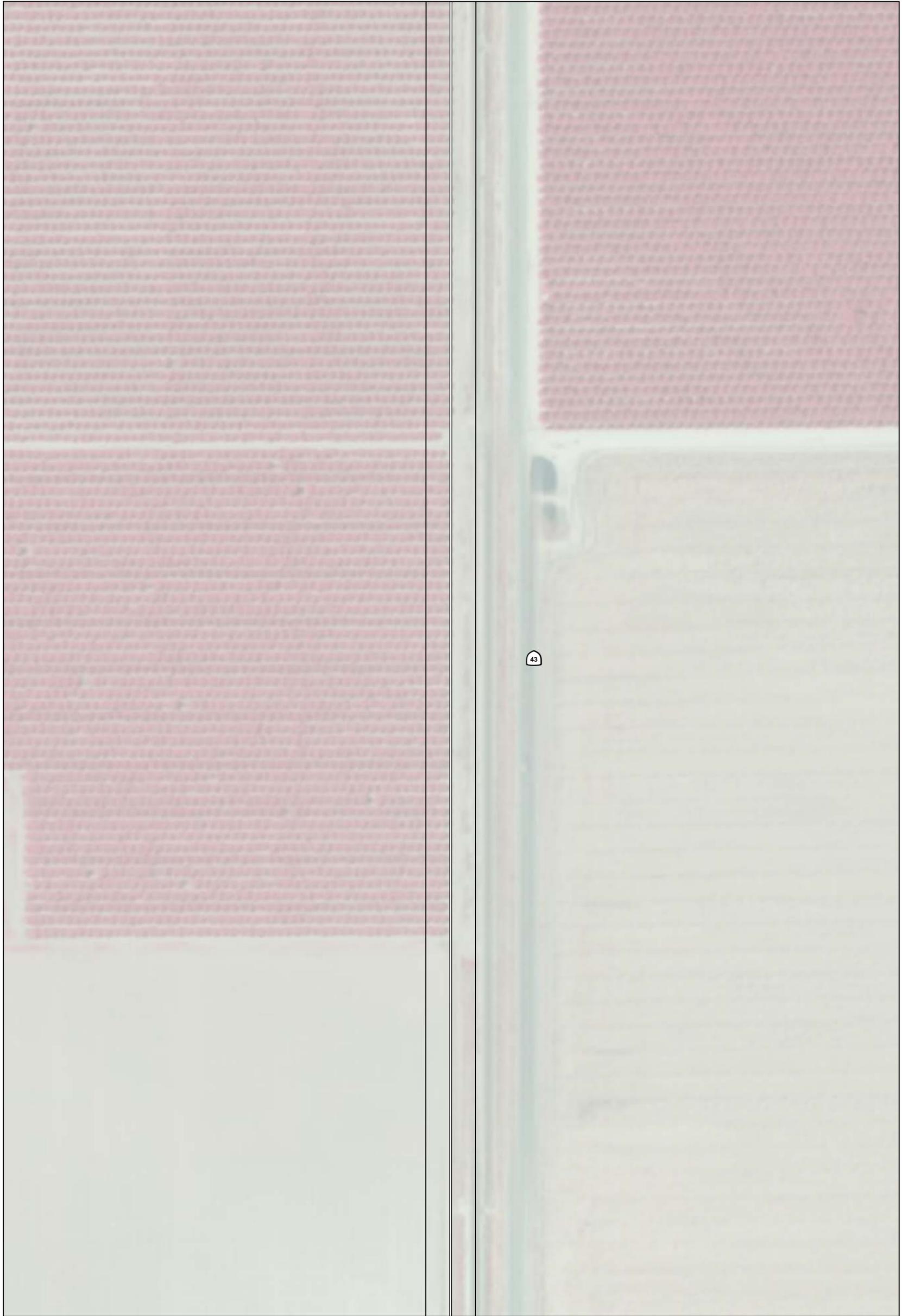
- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 183**

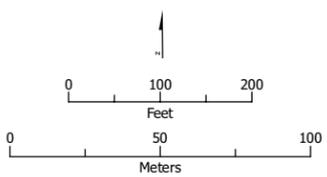
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 184**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



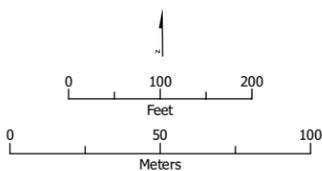
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 185**

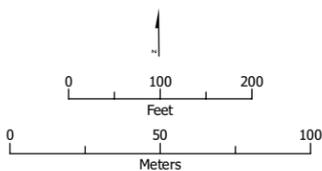
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 186**

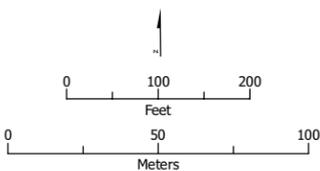
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 187**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



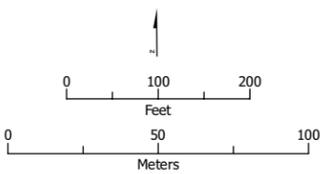
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

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**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 188**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



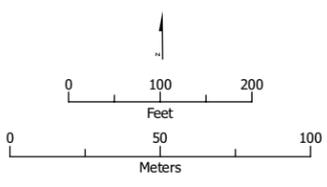
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011

- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area





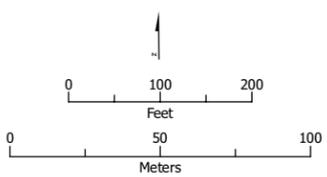
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 190**

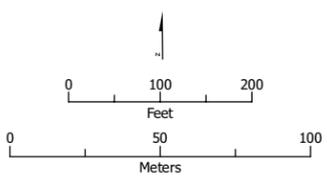
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 191**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



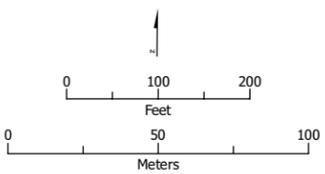
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



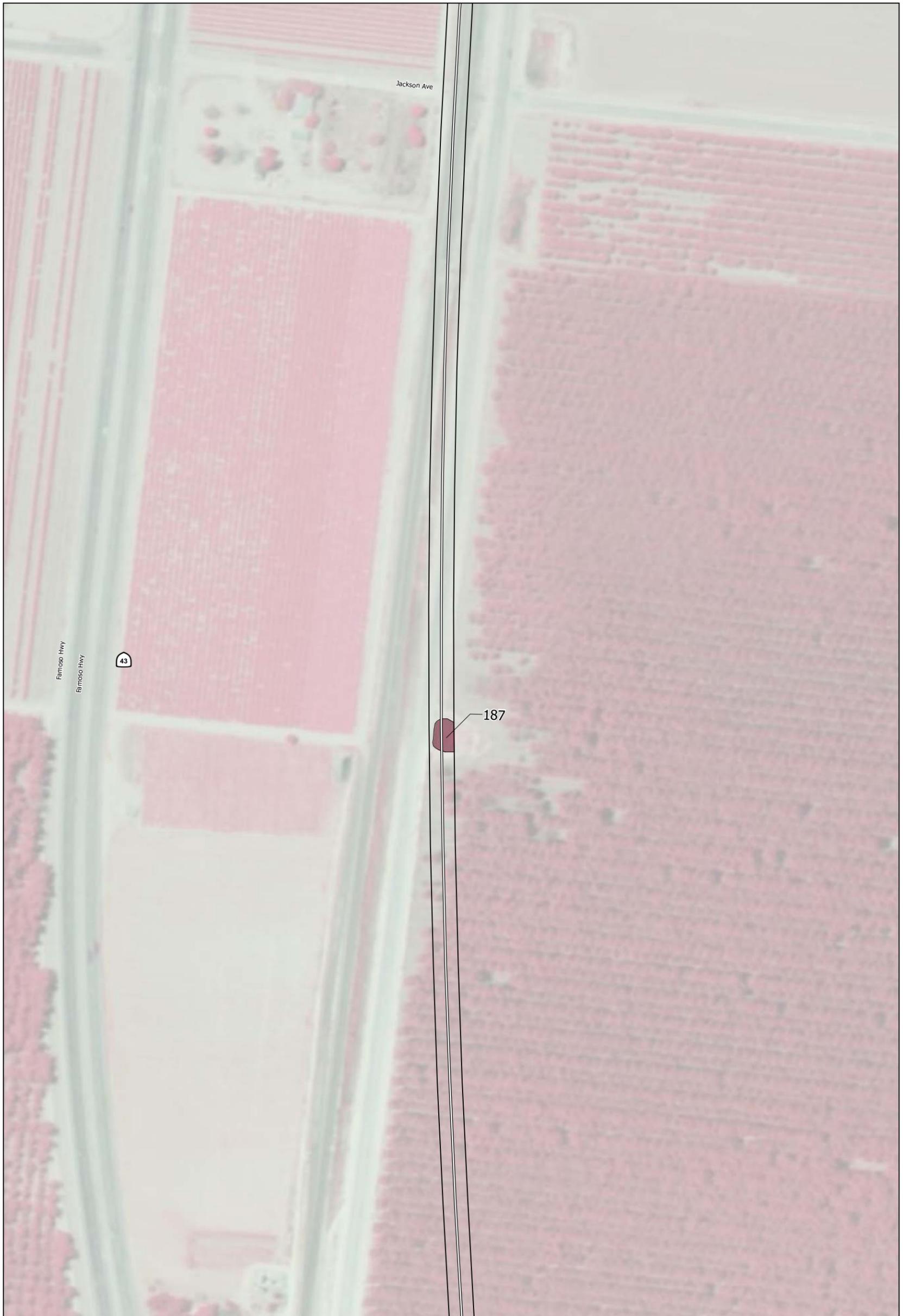
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 192**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

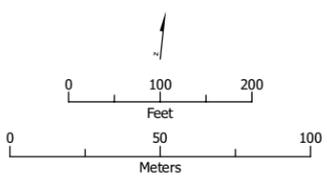
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 193**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

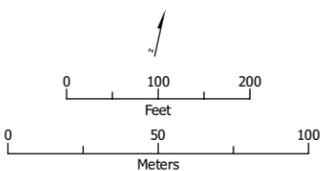


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

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**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 194**

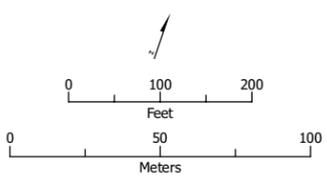
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 195**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



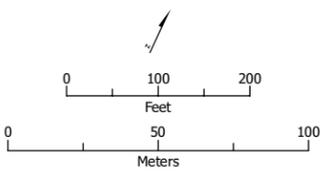
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 196**

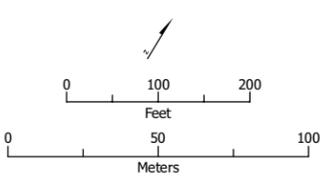
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

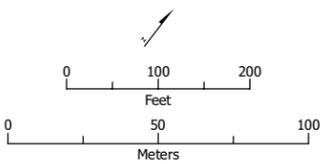
**Appendix E-1c  
 Sheet 197**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 198**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



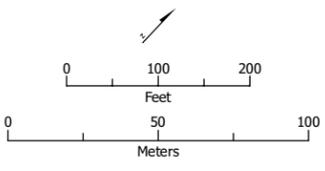
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



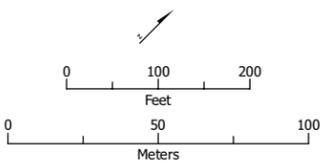
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



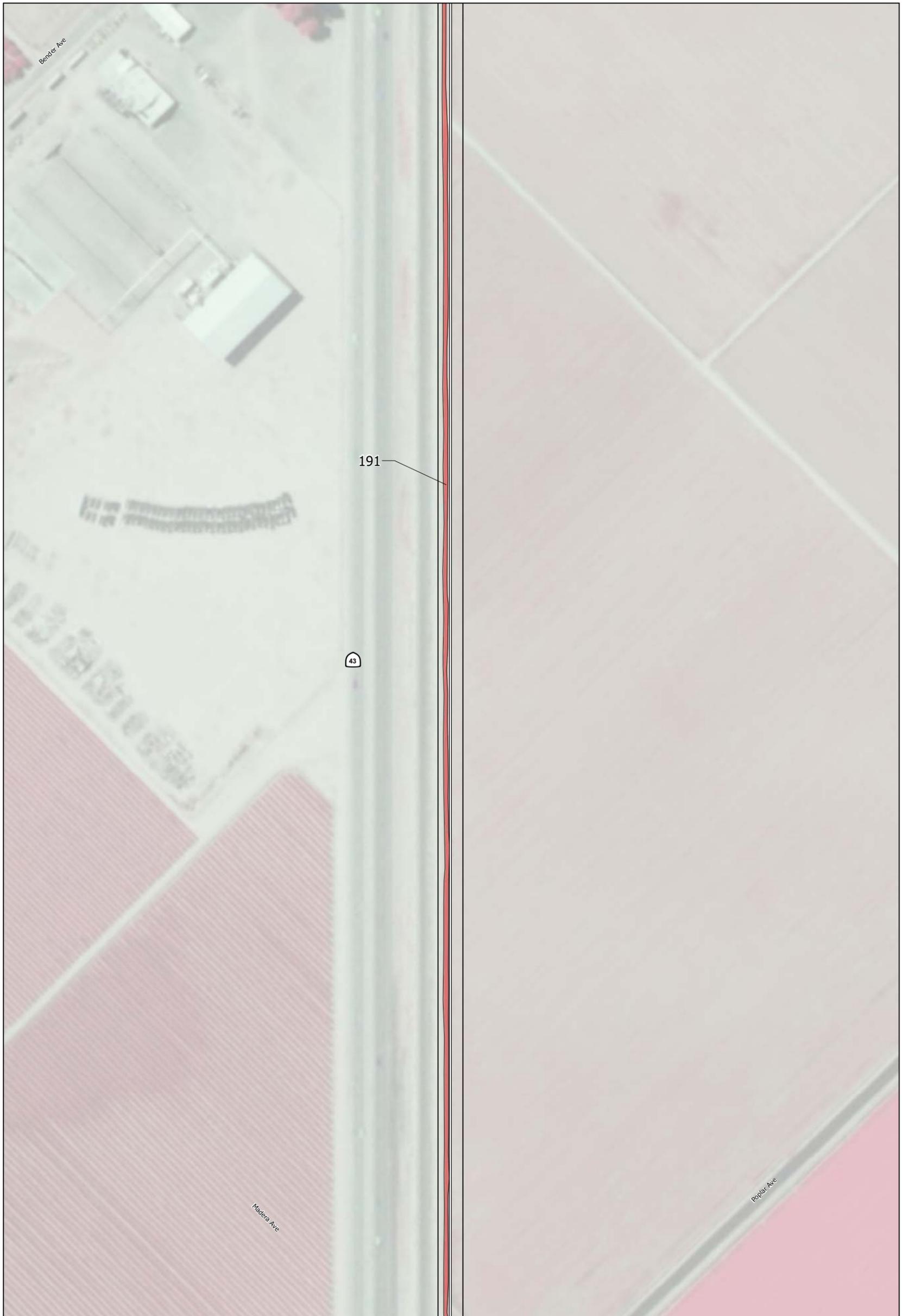
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 200**

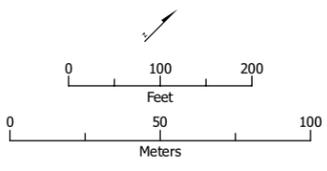
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 201**  
 Estimated special aquatic resources located  
 within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

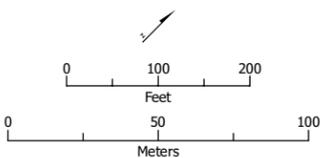
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 202**

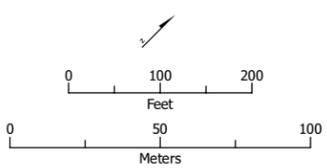
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 203**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

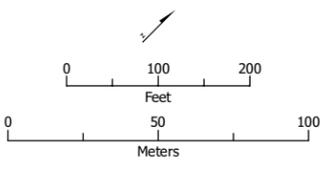


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

February 10, 2011

**Appendix E-1c  
Sheet 204**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



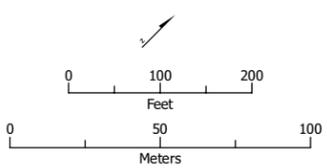
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 205**

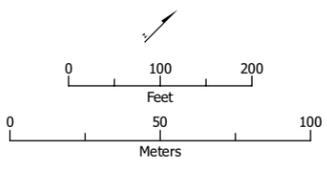
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c**  
**Sheet 206**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



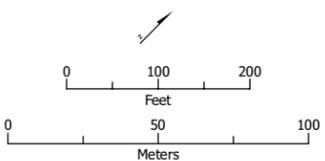
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 207**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

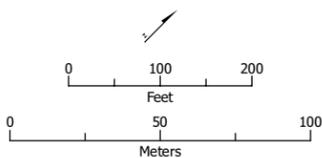
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 208**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



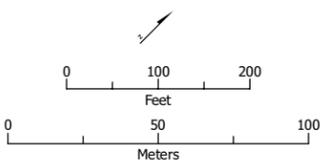
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



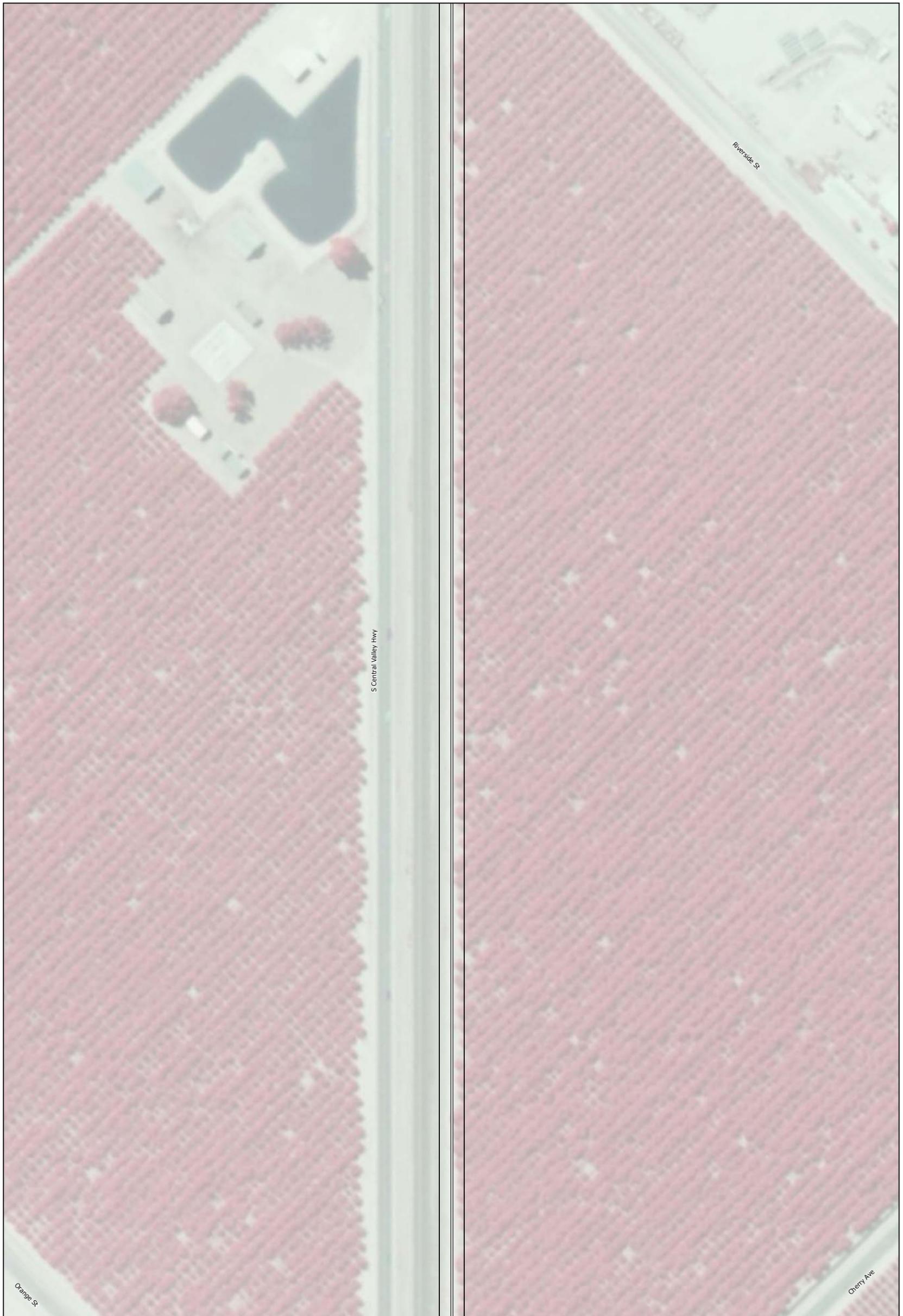
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 209**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



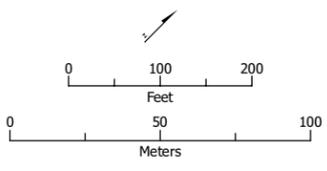
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 210**

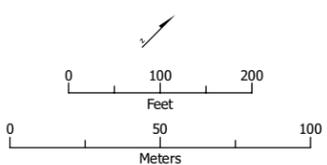
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 211**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



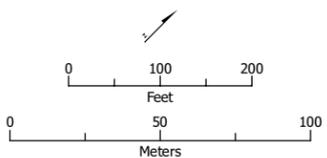
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 212**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



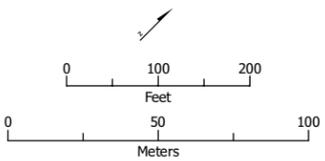
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



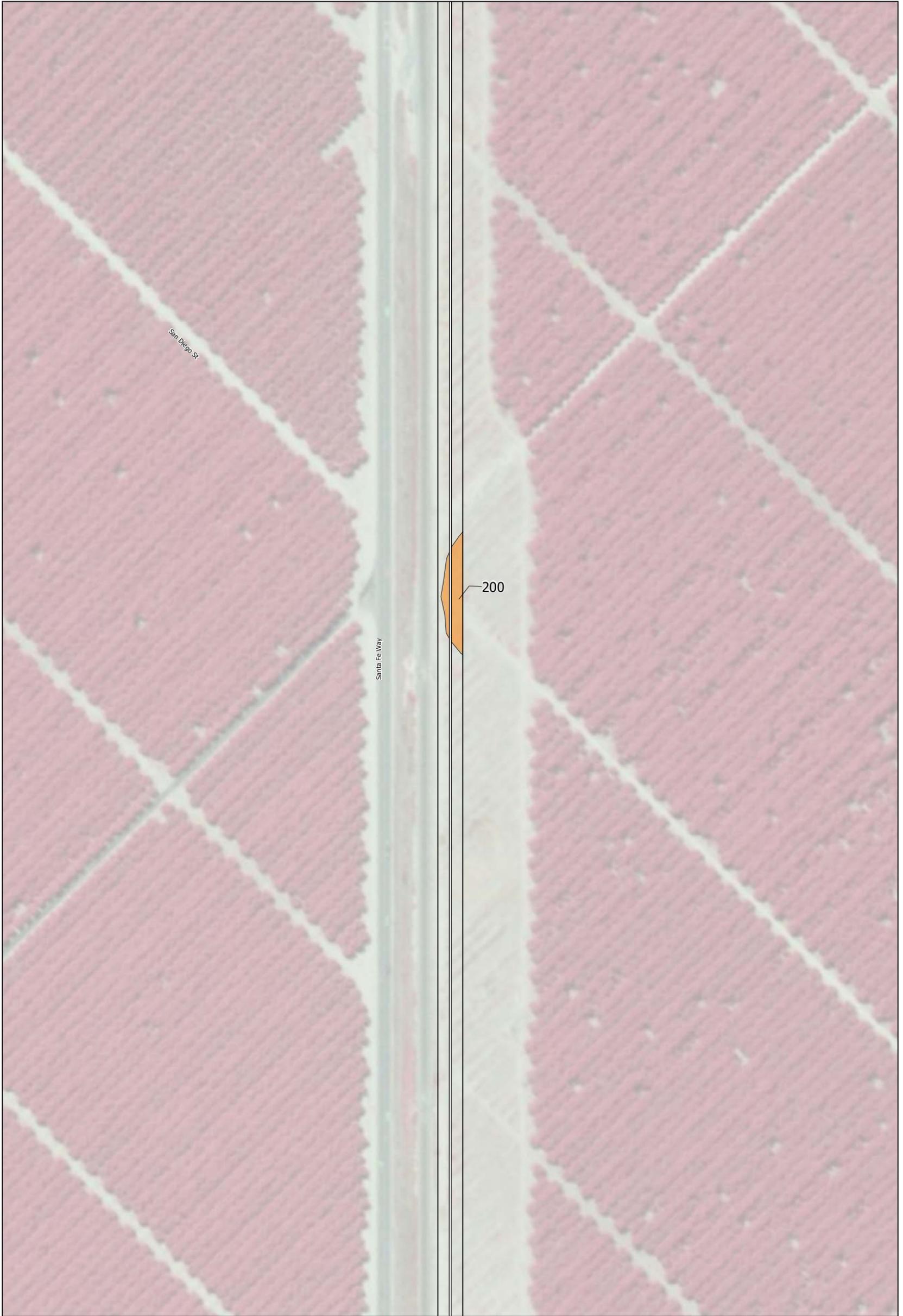
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 213**

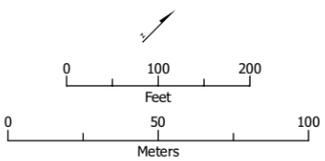
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 214**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



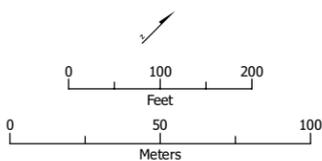
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



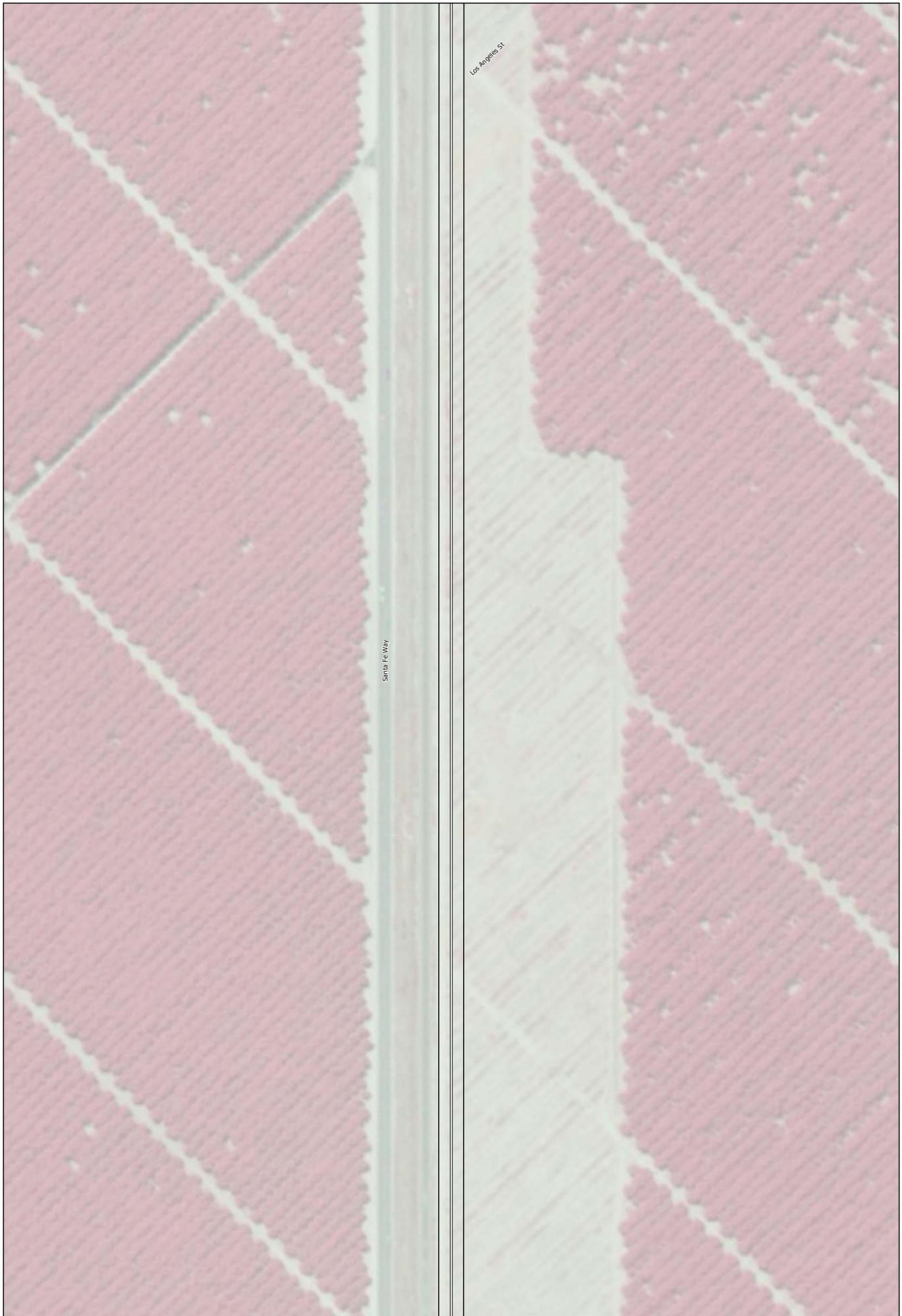
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 215**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

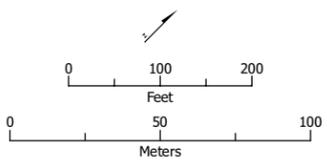
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area





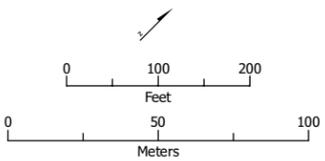
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 217**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



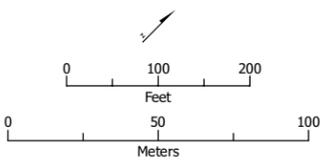
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 218**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



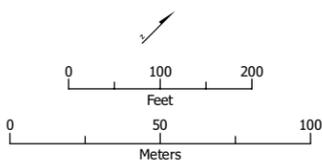
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 219**

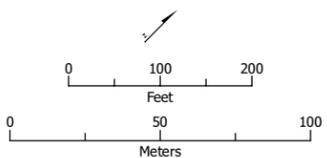
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 220**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



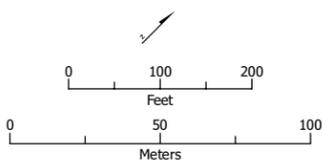
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



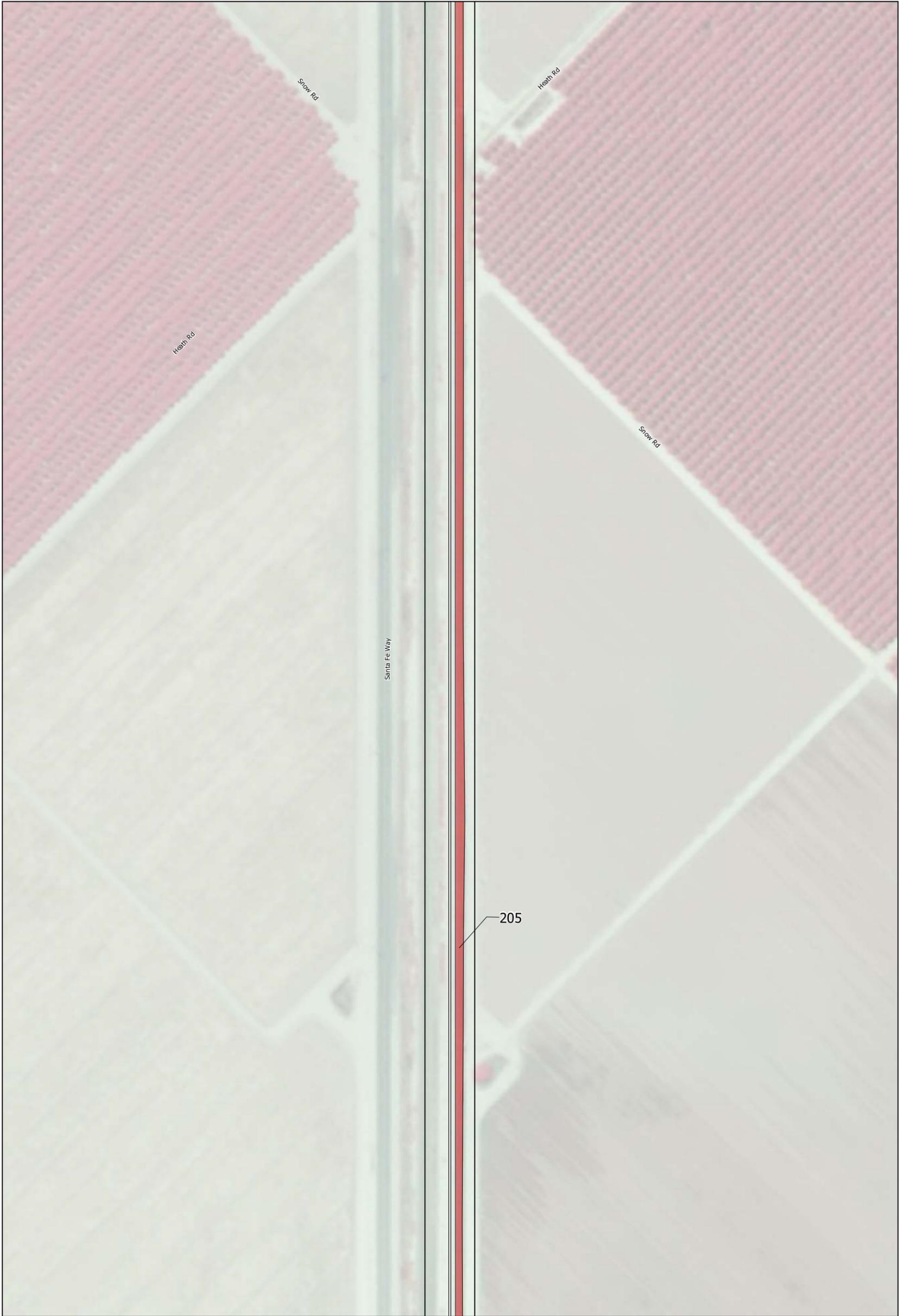
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 221**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

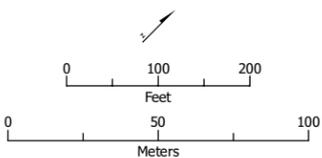
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

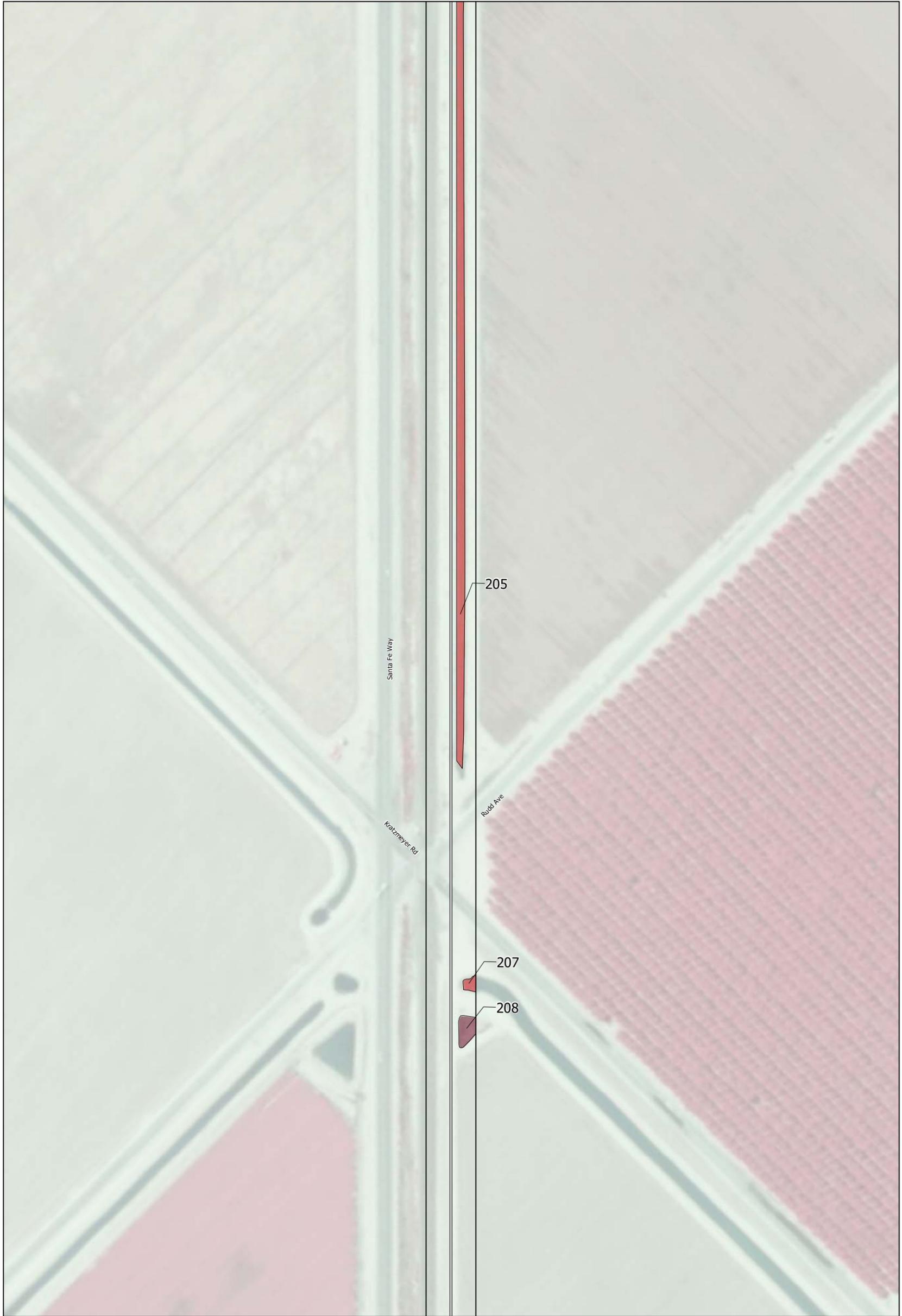
- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 222**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

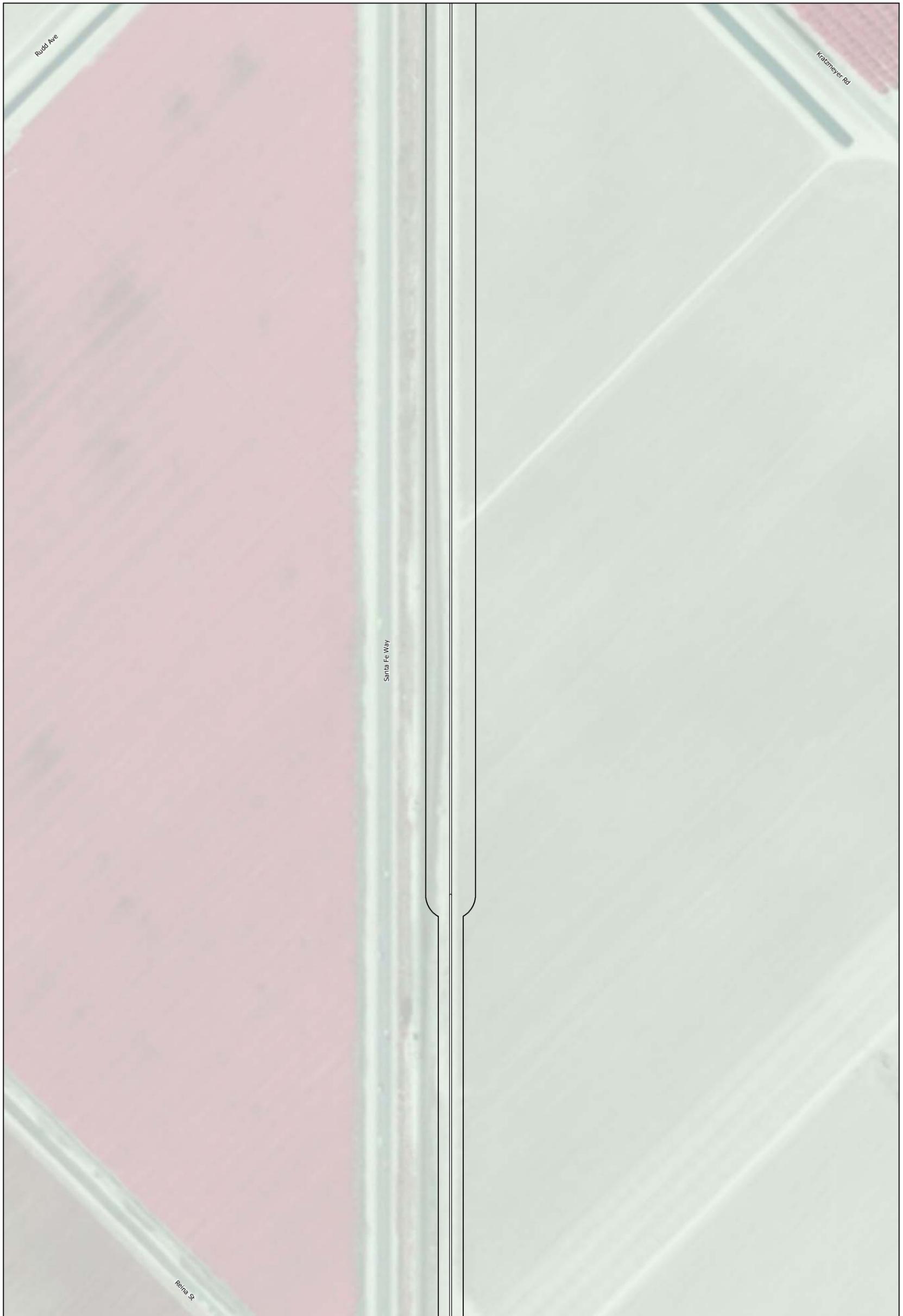
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 223**

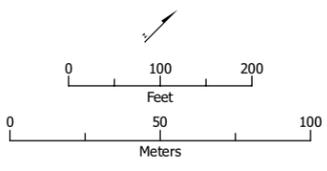
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 224**

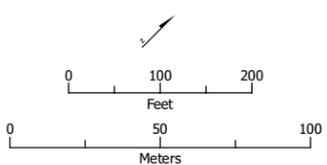
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



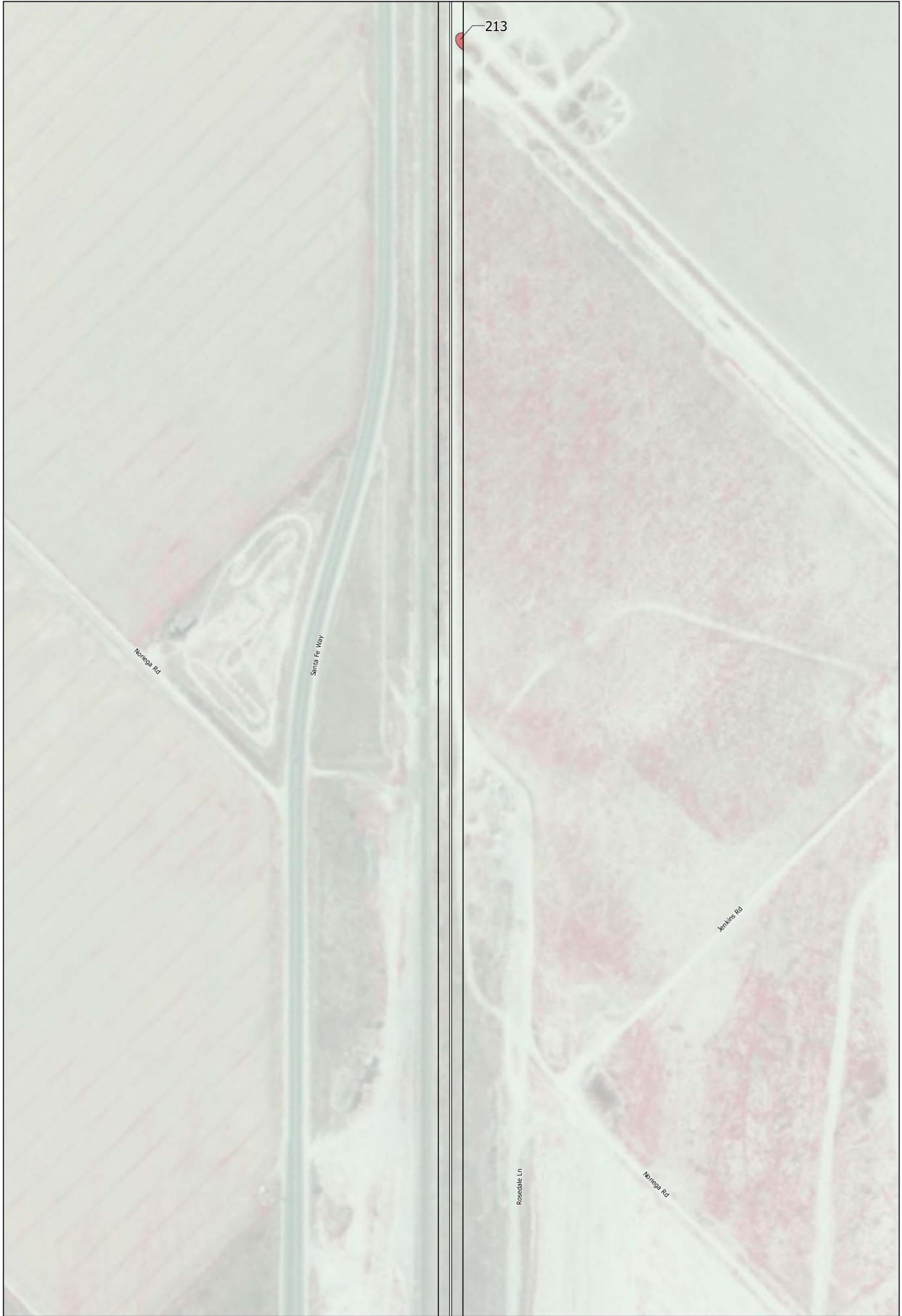
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 225**

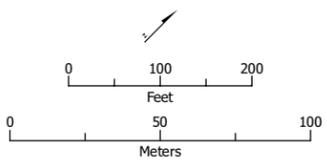
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 226**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



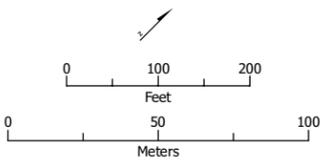
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 227**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



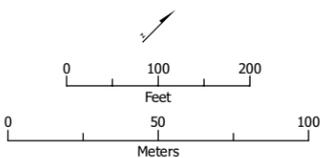
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 228**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



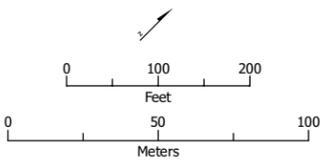
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



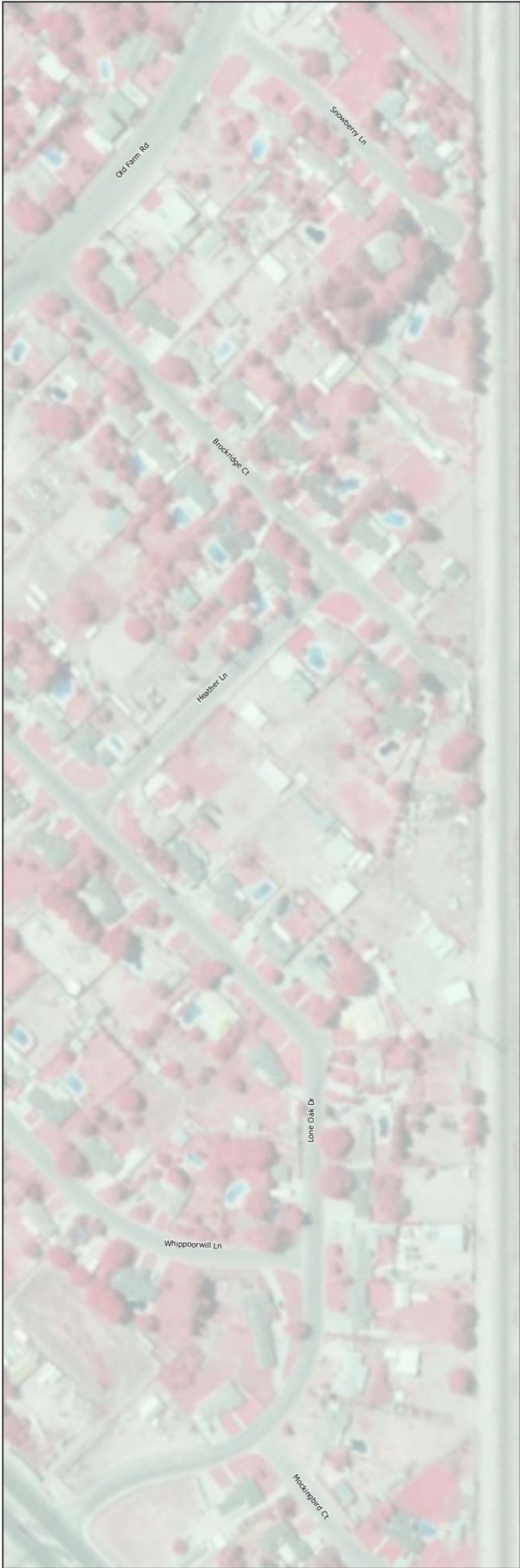
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 229**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area

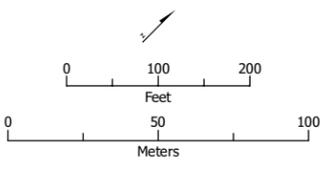


PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

February 10, 2011

**Appendix E-1c  
Sheet 230**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

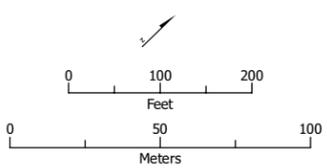
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area





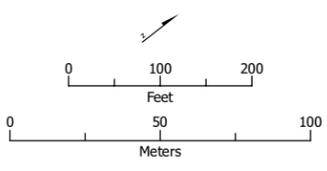
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011

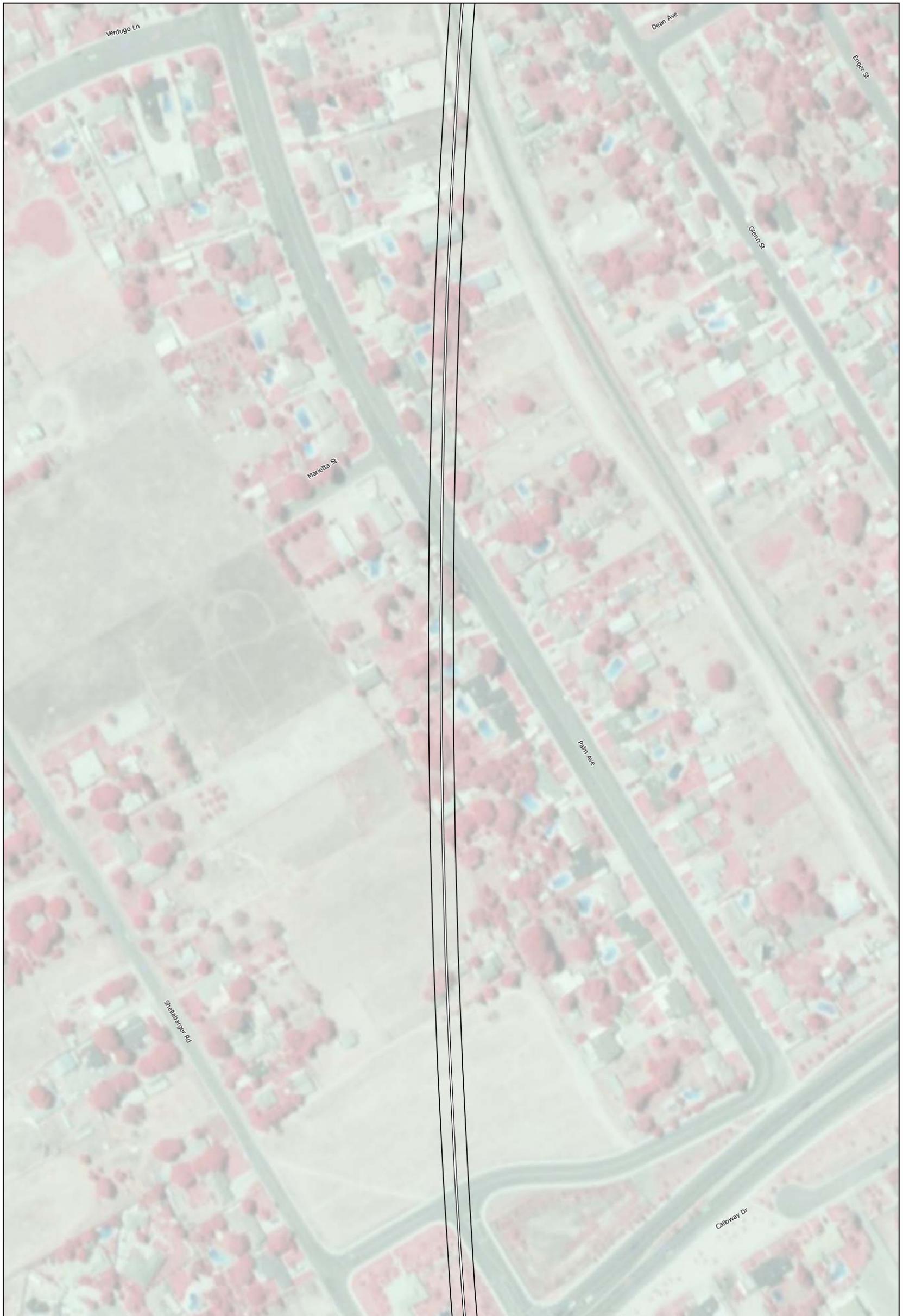


- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 232**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

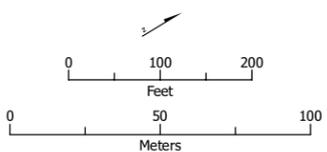
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 233**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

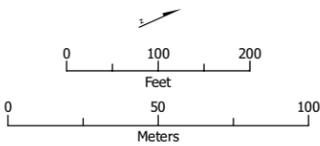
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 234**

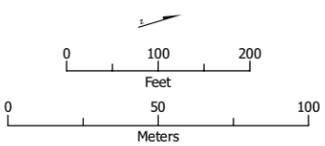
Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 235**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

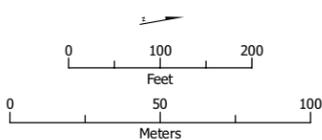
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 236**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

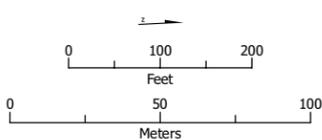
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c Sheet 237**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

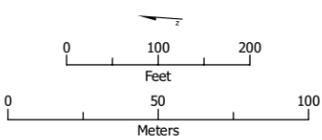
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 238**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

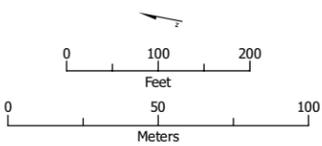
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 239**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

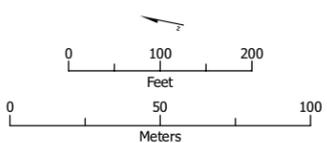
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 240**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

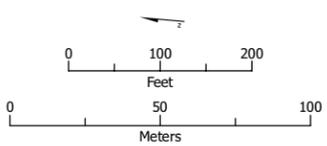
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area





PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

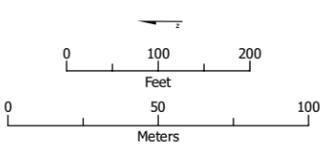
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area





PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

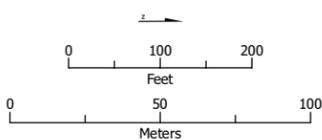
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 243**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

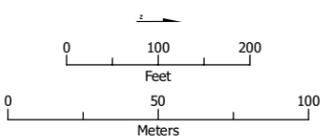
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c Sheet 244**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

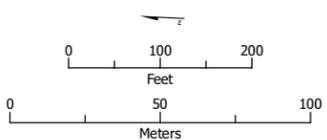
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 245**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

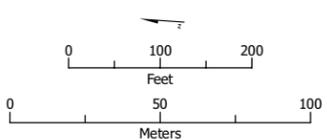
\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 246**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



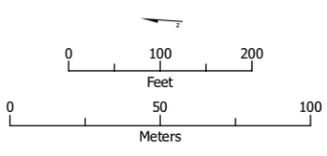
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



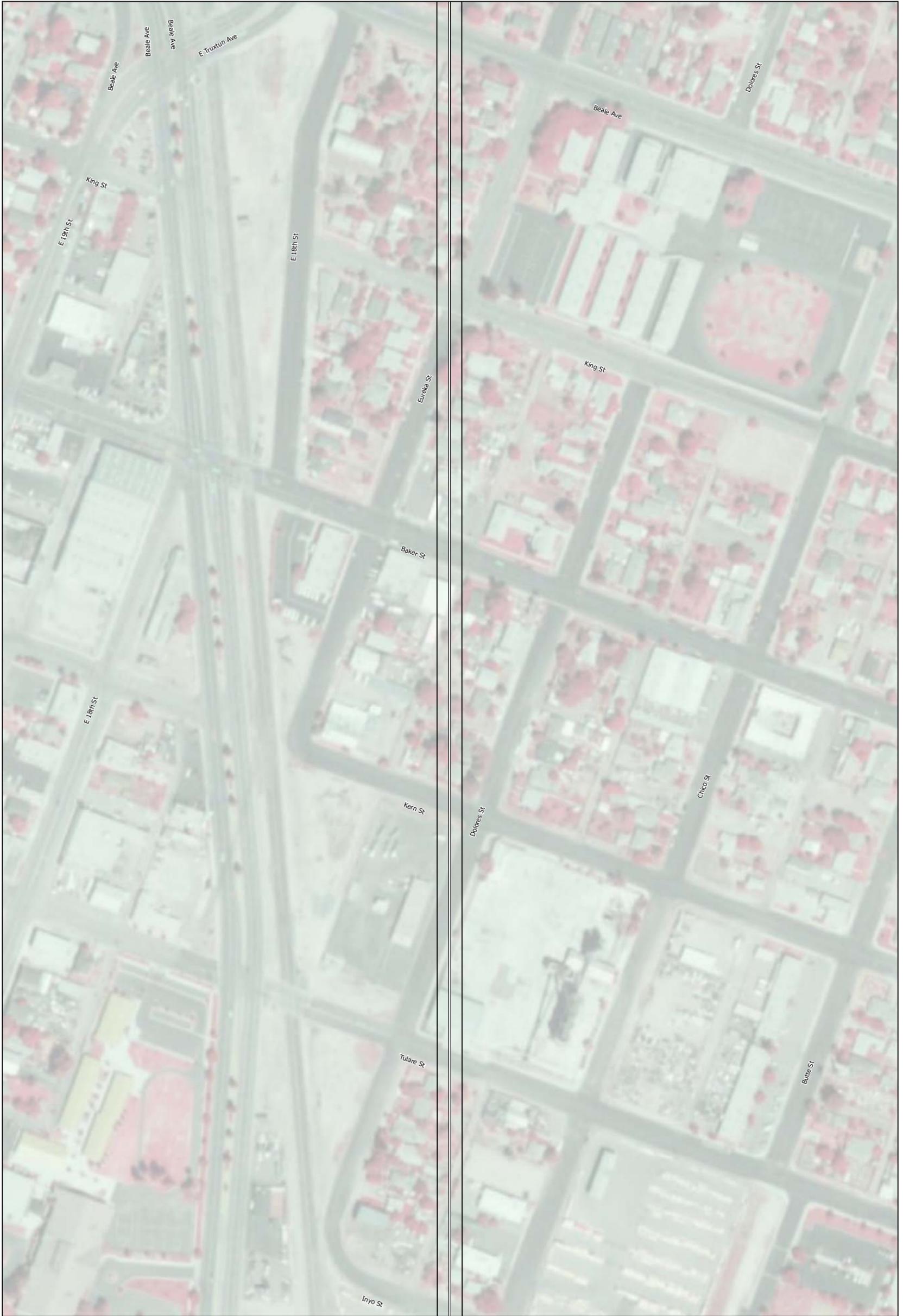
**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 247**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



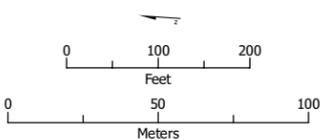
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
Sheet 248**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

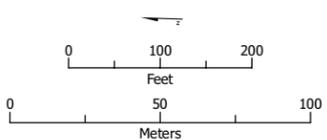
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 249**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

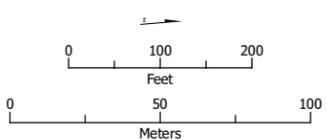
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
Sheet 250**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

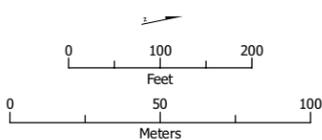
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



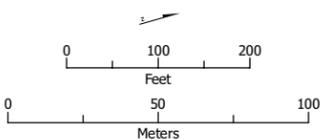
**Appendix E-1c**  
**Sheet 251**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED  
 Data source: Special aquatic resources - URS, 2010

Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

February 10, 2011



- Special aquatic resources with feature number**
- Canal/Ditch
  - Retention/Detention basin
  - Riparian
  - Riverine
  - Seasonal wetland
  - Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area

**Appendix E-1c  
 Sheet 252**  
 Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

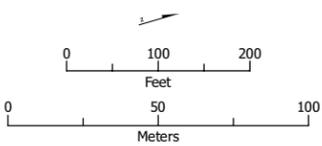
February 10, 2011

Data source: Special aquatic resources - URS, 2010  
 Imagery source: USDA NAIP, color infrared, 2005  
 \*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

- Canal/Ditch
- Retention/Detention basin
- Riparian
- Riverine
- Seasonal wetland
- Vernal pool complex (Holland, 2009)\*

- BNSF avoidance alternative
- BNSF avoidance alternative corridor study area



**Appendix E-1c  
 Sheet 253**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED

February 10, 2011

Data source: Special aquatic resources - URS, 2010

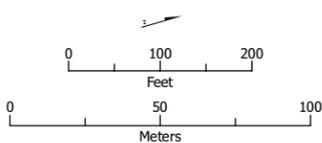
Imagery source: USDA NAIP, color infrared, 2005

\*This map shows vernal pool complexes as provided by Holland (2009). Vernal pool area reported in the document was derived through application of an empirically derived coefficient (0.22) to the total area of Holland vernal pool complexes.

**Special aquatic resources with feature number**

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**Appendix E-1c  
Sheet 254**

Estimated special aquatic resources located within the BNSF avoidance alternative alignment area