# INVERNESS PUBLIC UTILITY DISTRICT

FIRE DEPARTMENT ~ WATER SYSTEM

12781 SIR FRANCIS DRAKE BLVD • P.O. BOX 469 • INVERNESS CA 94937 • (415) 669-1414


**Board of Directors** | **AGENDA** | **Re-Scheduled Regular Meeting**

**Tuesday, November 19, 2024** | **12:00 p.m.** | **Inverness Firehouse, 50 Inverness Way**

1) **Call to Order; Attendance Report**

2) **Approval of Agenda**

3) **Public Expression:** Opportunity for members of the public to address the Board on matters under the Board's jurisdiction but not on the posted agenda. Directors or staff "***may briefly respond to statements made or questions posed***" during Public Expression, but "***no action or discussion shall be undertaken on any item not appearing on the posted agenda***" (Gov. Code §54954.2(a)(3)). Members of the public may comment on any item listed on the posted agenda at the time the item is considered by the Board.

4) **Consent Calendar**

*All items listed under the Consent Calendar are considered routine and will be enacted by one motion. There will be no separate discussion of these items unless a member of the Board of Directors, staff, or public requests that a specific item be removed for separate discussion and action.*

**A.** Approval of Minutes: October 24, 2024 Re-Scheduled Regular Meeting Minutes

**B.** Approval of Expenditures

1. Accounts Payable: 10/1/2024 - 10/31/2024
2. Credit Card Purchases: 10/1/2024-10/31/2024
3. Payroll: 10/1/2024-10/31/2024

5) **Reports**: Receive Reports On Administrative and Operational Activities For October 2024

**A. General Manager's Report**

1. FY 2024-2025 1st Quarter Cash and Investment Reports
2. Measure W (TOT) FY 2023-2024 Final Fiscal Report
3. Grants and Projects Report
4. Colby/Seahaven Tank Project Update
5. Marin Water Managers Quarterly Meeting
6. CSDA Roundtable Meeting with Congressman Jarod Huffman's Staff
7. California Department of Insurance – Public Meeting Update

**B. Operations Reports**

1. Water System Report September 2024 Water System Report
2. Fire Department Report September 2024 Fire Department Report
3. September 2024 Marin Wildfire Prevention Authority (MWPA) Report

6) **Business of the District**

**A. Resolution 291-2024: Designating The Time and Place For Holding Regular Meetings:** Approval to schedule the regular meeting dates and times as the third Tuesday of every month at 12:00 pm.

**B. Approval of the 2025 Board Meeting Schedule**

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Material provided in the meeting packet is available on the District's website, www.invernesspud.org, or by contacting the District office.
Items may not be taken up in the order shown on this Agenda.
For assistance in participating in this event due to a disability as defined under the ADA, please call in advance to (415) 669-1414.

**THE PUBLIC IS CORDIALLY INVITED TO ATTEND AND TO COMMENT ON AGENDA ITEMS**

**C) Consider and Approve Establishing Funding Goals for Long-Term Unfunded Liabilities of Pension and Other Post Employment Benefits (OPEB) and Consider and Approve Proposal To Establish a Section 115 Pension Prefunding Trust Account with CalPERS (CEPPT).**

**7) Committee Meetings/Reports**

- **Personnel Committee:** Report on Water System Staffing
- **2024 Holiday Party**

**8) Adjournment**

**Posted: 11/16/2024**

Inverness Public Utility District
Board Meeting

# Agenda Item No. 1

## Call to Order;

## Attendance Report

Inverness Public Utility District
Board Meeting

# Agenda Item No. 2

## Approval of Agenda

Inverness Public Utility District
Board Meeting

# Agenda Item No. 3

## Public Expression

**Opportunity for members of the public to address the Board on matters under the Board's jurisdiction but not on the posted agenda.**

**Directors or staff "*may briefly respond to statements made or questions posed*" during Public Expression, but "*no action or discussion shall be undertaken on any item not appearing on the posted agenda*" (Gov. Code §54954.2(a)(3)).**

**Members of the public may comment on any item listed on the posted agenda at the time the item is considered by the Board.**

Inverness Public Utility District
Board Meeting

# Agenda Item No. 4

## Consent Calendar

*All items listed under the Consent Calendar are considered routine and will be enacted by one motion. There will be no separate discussion of these items unless a member of the Board of Directors, staff, or public requests that a specific item be removed for separate discussion and action.*

**A. Approval of Minutes**

**B. Approval of Expenditures**

# INVERNESS PUBLIC UTILITY DISTRICT

**FIRE DEPARTMENT ✧ WATER SYSTEM**

POST OFFICE BOX 469, INVERNESS, CA 94937

OFFICE: 12781 SIR FRANCIS DRAKE BLVD., SUITE 5, INVERNESS, CA

415-669-1414 ~ WWW.INVERNESSPUD.ORG ~ ADMIN@INVERNESSPUD.ORG


**Board of Directors**
**Minutes, Regular Meeting**
**Thursday, October 24, 2024, 12:00 p.m.**
**Inverness Firehouse, 50 Inverness Way, Inverness CA**

1. **Call to Order; Attendance Report**

   President Donohue called the meeting to order at 4:00 p.m.

   Directors Present: Kathryn Donohue, Dakota Whitney. David Press
   Directors Absent: Kenneth Emanuels, Brent Johnson
   Staff Present: Shelley Redding, General Manager; David Briggs, Assistant Fire Chief; Jim Fox, Senior Water Operator

2. **Approval of Agenda:** Director Donohue requested that the reports listed under the Consent Calendar be removed and listed as a separate section.

   *M/S Press/Whitney to approve the Agenda with the reports section removed from the Consent Calendar and listed as a separate section.* **AYES 3, NOES 0.**

3. **Public Expression:** No one responded to the invitation to address the Board.

4. **Consent Calendar**

   **A) Approval of Minutes:** Regular Meeting of September 17, 2024.

   **B) Approval of Expenditures:** September 2024

   *M/S Press/Whitney to approve the Consent Calendar as presented.* **AYES 3, NOES 0.**

**Business of the District**

**5A. Annual Investment Policy Review**: Review the Investment Policy dated September 26, 2012, and adopted September 26, 2012, and determine whether modifications are needed at this time.

*M/S Whitney/Press to approve the Annual Investment Policy as adopted September 26, 2012, with no recommendations for changes at this time.* **AYES 3, NOES 0.**

**5B. Meeting of the Committee of the Whole to Review and Approve Investment Options (Nuclear Free Zone Ordinance):** Review and approve IPUD's investments as they relate to the Nuclear Free Zone Ordinance.

*M/S Whitney/Press to approve the Investment Options as they relate to the Nuclear Free Zone Ordinance as presented.* **AYES 3, NOES 0.**

**5C. Resolution 289-2024**: Approving the form of and authorizing the execution of a Memorandum of Understanding and authorizing participation in the Special District Risk Management Authority (SDRMA) Health Benefits.

*M/S Whitney/Press to approve Resolution 289-2024 approving and authorizing the execution of the Memorandum of Understanding and authorizing participation in the Special District Risk Management Authority (SDRMA) Health benefits program for Dental, Vision and Employee Assistance Programs.* **AYES 3, NOES 0.**

**5D. California Water/Wastewater Agency (CalWARN) Mutual Assistance Agreement:** Adopting and Approving the CalWARN Agency Response Network 2007 Omnibus Mutual Assistance Agreement.

*M/S Press/Whitney to adopt and approve the CalWARN Agency Response Network 2007 Omnibus Mutual Assistance Agreement as presented.* **AYES 3, NOES 0.**

**6. Management Report:**

General Manager Shelley Redding presented reports for the items listed below. General discussion about the current financial reports for the first quarter, the current grants and projects. Staff reported that the tank replacement project is awaiting the revised site plans for both sites and has nothing new to report about the project. GM Redding reported on the LAFCo public meeting hosted by IPUD. It was noted that IPUD will not have any further involvement in the boundary action being requested by NMWD. GM Redding also noted that a mailer from the California Department of Insurance sent out informational fliers with offers to have representatives come to speak in person about homeowner insurance issues and steps the state is taking to develop a plan for coverage. She noted that she had sent an informational email to Mark Brown, the Executive Director of the MWPA, who in turn involved the County Office of Emergency Management. The County is currently developing strategies to address the same issues and plans are being made for public meetings about this issue. GM Redding has followed up with Mark Brown who noted that the County Administrator Office is planning the meetings and has asked that IPUD be kept informed about the meeting schedule. She handed out fliers provided with the mailer for anyone interested.

**4C. Operations Reports: (Moved from Consent Calendar)**

The September Water System report and the Fire Department reports were presented. The September 2024 MWPA report was presented and general discussion about the local defensible space inspection letters being mailed to property owners in Inverness as an effort to provide support and resources if requested. Chief Fox noted that the Marin Emergency Radio Authority (MERA) system is now operational. The District has received new pagers and there are still some connectivity issues to be resolved. The dispatch is now located on Los Gamos Road in San Rafael, where the Couty OEM is located.

**7. Committee Meetings/Reports**

There were no committee reports.

**8. November Meeting**

GM Redding asked if the Board would like to keep the date of the next Board meeting of November 19, 2024 but change the time to 12:00 PM? General discussion about the 12:00 PM meeting time is desired. GM Redding noted she would post a notice about the time change from 4:00 pm to 12:00 PM for the next Board meeting.

**9. Adjournment**

The meeting was adjourned at 12:42 p.m. The next regular meeting of the Board is scheduled for November 19, 2024 at 12:00 pm.

Attest: /s/ Date: 10/24/2024

Shelley Redding, Clerk of the Board

# Inverness Public Utility District
## Check Detail
### October 2024

| Type | Num | Date | Name | Memo | Account | Paid Amount |
|---|---|---|---|---|---|---|
| **Check** | **ACH** | **10/16/2024** | **Bank of America** | **Service Charge** | **1-103 · Bank of America 4809** | |
| | | | | Service Charge | 870-06 · Banking & Payroll Charges | -318.51 |
| TOTAL | | | | | | -318.51 |
| **Bill Pmt -Check** | **ACH** | **10/01/2024** | **Inverness Properties** | **October 2024 Admin Office Lease** | **1-103 · Bank of America 4809** | |
| Bill | | 10/01/2024 | | October 2024 Admin Office Lease | 870-15 · Admin. Office Rent | -1,236.00 |
| TOTAL | | | | | | -1,236.00 |
| **Bill Pmt -Check** | **ACH** | **10/03/2024** | **CalPERS Health** | **October Health Premiums** | **1-103 · Bank of America 4809** | |
| Bill | 17679314 | 09/16/2024 | | October Health Premiums | 810-07 · Health Insurance | -6,128.46 |
| | | | | October Health Premiums | 810-07 · Health Insurance | -1,021.41 |
| | | | | October Health Premiums | 810-07 · Health Insurance | -2,655.67 |
| | | | | October Health Premiums | 810-07 · Health Insurance | -832.70 |
| | | | | October Health Premiums | 810-08 · Retiree Health Ins. | -268.62 |
| | | | | October Health Premiums | 810-08 · Retiree Health Ins. | -2,104.26 |
| TOTAL | | | | | | -13,011.12 |
| **Bill Pmt -Check** | **ACH** | **10/15/2024** | **Truist Bank** | **AR Box September 2024** | **1-103 · Bank of America 4809** | |
| Bill | IPUD 0114 | 10/01/2024 | | AR Box September 2024 | 870-12 · Billing & Collections | -10.66 |
| TOTAL | | | | | | -10.66 |
| **Bill Pmt -Check** | **ACH** | **10/15/2024** | **California Department of Tax an** | **Use Tax - UTV Purchase - Out of State** | **1-103 · Bank of America 4809** | |
| Bill | 0-044-706-133 | 10/15/2024 | | Use Tax - UTV Purchase - Out of State | 2371-37 Fire UTV | -3,948.46 |
| TOTAL | | | | | | -3,948.46 |
| **Bill Pmt -Check** | **ACH** | **10/16/2024** | **U. S. Bank Bancorp Purchashing Card Prog** | | **1-103 · Bank of America 4809** | |
| Bill | | 09/23/2024 | | D. Briggs | CalCard xx0239 David Briggs | -2,143.27 |
| Bill | | 09/23/2024 | | S. Redding | CalCard xx7757 S. Redding | -293.30 |
| Bill | | 09/23/2024 | | J. Fox | CalCard xx6591 Jim Fox | -1,491.15 |
| TOTAL | | | | | | -3,927.72 |
| **Bill Pmt -Check** | **ACH** | **10/31/2024** | **Innovative Business Solutions** | **95952** | **1-103 · Bank of America 4809** | |
| Bill | 200776 | 10/31/2024 | | | 870-06 · Banking & Payroll Charges | -245.50 |
| TOTAL | | | | | | -245.50 |
| **Bill Pmt -Check** | **Auto** | **10/09/2024** | **Diversified Tech** | | **1-103 · Bank of America 4809** | |
| Bill | | 10/09/2024 | | Water Billing Provider | 870-12 · Billing & Collections | -758.00 |
| TOTAL | | | | | | -758.00 |
| **Bill Pmt -Check** | **Auto** | **10/29/2024** | **PG&E** | | **1-103 · Bank of America 4809** | |
| Bill | | 10/22/2024 | | Utilities | 840-07 · Collection/Treat Utilities | -2,707.42 |

# Inverness Public Utility District
## Check Detail
### October 2024

| | Type | Num | Date | Name | Memo | Account | Paid Amount |
|---|---|---|---|---|---|---|---|
| | | | | | | 840-08 · Distribution Utilities | -56.86 |
| | | | | | | 840-10 · Admin Office Utilities | -38.42 |
| | | | | | | 840-09 · Firehouse Utilities | -169.76 |
| TOTAL | | | | | | | -2,972.46 |
| | **Bill Pmt -Check** | **EFT** | **10/01/2024** | **Verizon Wireless** | | **1-103 · Bank of America 4809** | |
| | Bill | 9975288667 | 10/24/2024 | | Utilities | 870-01 · Telephone & Internet | -40.01 |
| TOTAL | | | | | | | -40.01 |
| | **Check** | **EFT** | **10/16/2024** | **First International Collection** | | **1-103 · Bank of America 4809** | |
| | | | | | Payroll Processing Fee | 870-06 · Banking & Payroll Charges | -61.69 |
| TOTAL | | | | | | | -61.69 |
| | **Check** | **EFT** | **10/16/2024** | **First International Collection** | | **1-103 · Bank of America 4809** | |
| | | | | | Payroll Processing Fee | 870-06 · Banking & Payroll Charges | -25.00 |
| TOTAL | | | | | | | -25.00 |
| | **Check** | **Wire** | **10/15/2024** | **Kotapay** | | **1-103 · Bank of America 4809** | |
| | | | | | Payroll | 66000 · Payroll Clearing | -19,665.39 |
| TOTAL | | | | | | | -19,665.39 |
| | **Check** | **Wire** | **10/15/2024** | **Kotapay** | | **1-103 · Bank of America 4809** | |
| | | | | | Payroll Tax | 66000 · Payroll Clearing | -7,588.34 |
| TOTAL | | | | | | | -7,588.34 |
| | **Bill Pmt -Check** | **14513** | **10/28/2024** | **Brelje & Race Engineering** | | **1-104 · Bank of America 0150** | |
| | Bill | 0028688 | 07/16/2024 | | Professional personnel - Seahaven tank improveme | 1371-35 · Colby & Seahaven Tank Improve | -3,710.00 |
| | | | | | Environmental Services - Colby/Seahaven | 1371-35 · Colby & Seahaven Tank Improve | -2,457.50 |
| TOTAL | | | | | | | -6,167.50 |
| | **Bill Pmt -Check** | **60551** | **10/07/2024** | **Burton Eubank** | **Volunteer Stipend** | **1-103 · Bank of America 4809** | |
| | Bill | August 2024 | 09/14/2024 | | Volunteer Stipend | 843-03 · Volunteer Stipends | -375.00 |
| TOTAL | | | | | | | -375.00 |
| | **Bill Pmt -Check** | **60552** | **10/07/2024** | **Amazon Capital Services** | **Annual Membership Fee** | **1-103 · Bank of America 4809** | |
| | Bill | 1NWD-4CNM-CCL | 09/26/2024 | | Annual Membership Fee | 870-02 · Dues/Publications/Subscriptions | -193.77 |
| TOTAL | | | | | | | -193.77 |
| | **Bill Pmt -Check** | **60553** | **10/07/2024** | **Horizon Cable TV Inc.** | | **1-103 · Bank of America 4809** | |
| | Bill | 005-003907 10/24 | 10/01/2024 | | Internet-Firehouse | 870-01 · Telephone & Internet | -90.04 |
| | Bill | 005-009493 10/24 | 10/01/2024 | | Admin Office Internet | 870-01 · Telephone & Internet | -105.04 |
| TOTAL | | | | | | | -195.08 |
| | **Check** | **60554** | **10/07/2024** | **The DeSalvo Trust** | **Closed Account - Credit Balance Refund 7 Glen ' | 1-103 · Bank of America 4809** | |
| | | | | Water Customer | Closed Account - Credit Balance Refund 7 Glen Wa | 130.1 · Customer Refunds | -75.01 |

# Inverness Public Utility District
## Check Detail
### October 2024

| Type | Num | Date | Name | Memo | Account | Paid Amount |
|---|---|---|---|---|---|---|
| TOTAL | | | | | | -75.01 |
| **Bill Pmt -Check** | **60555** | **10/15/2024** | **Alpha Analytical Laboratories, Inc,** | | **1-103 · Bank of America 4809** | |
| Bill | 4104085-INVPUD | 10/08/2024 | | TOCs | 835-02 · Periodic Samples | -375.00 |
| Bill | 4104651-INVPUD | 10/10/2024 | | Haloacetic acids, trihalomethanes | 835-02 · Periodic Samples | -312.00 |
| TOTAL | | | | | | -687.00 |
| **Bill Pmt -Check** | **60556** | **10/15/2024** | **CORE Utilities, Inc.** | | **1-103 · Bank of America 4809** | |
| Bill | 42858 | 10/09/2024 | | September IT | 870-11 · Office IT Support | -150.00 |
| TOTAL | | | | | | -150.00 |
| **Bill Pmt -Check** | **60557** | **10/15/2024** | **Lunny Grading & Paving** | | **1-103 · Bank of America 4809** | |
| Bill | 14164 | 10/10/2024 | | 3/4" drain rock - various places | 840-03 · Grounds Maintenance | -113.01 |
| TOTAL | | | | | | -113.01 |
| **Bill Pmt -Check** | **60558** | **10/15/2024** | **USA Blue Book** | **70259** | **1-103 · Bank of America 4809** | |
| Bill | INV00497930 | 09/27/2024 | | LMI Pump head | 850-01 · Supplies & Inventory | -271.32 |
| TOTAL | | | | | | -271.32 |
| **Bill Pmt -Check** | **60559** | **10/21/2024** | **AT&T Mobility** | **287322251032** | **1-103 · Bank of America 4809** | |
| Bill | 287322251032X10 | 10/01/2024 | | Briggs | 870-01 · Telephone & Internet | -50.51 |
| | | | | iPhone device | 870-01 · Telephone & Internet | -45.47 |
| | | | | iPhone device | 870-04 · Audit & Financial | -45.47 |
| | | | | Home office | 870-01 · Telephone & Internet | -50.51 |
| | | | | iPhone device (chief) | 870-01 · Telephone & Internet | -50.51 |
| TOTAL | | | | | | -242.47 |
| **Bill Pmt -Check** | **60560** | **10/21/2024** | **Napa Auto Parts** | | **1-103 · Bank of America 4809** | |
| Bill | 284884 | 10/13/2024 | | Battery and oil for 333 | 860-02 · Vehicle Repairs & Service | -739.05 |
| TOTAL | | | | | | -739.05 |
| **Bill Pmt -Check** | **60561** | **10/21/2024** | **North Marin Water District** | | **1-103 · Bank of America 4809** | |
| Bill | 14253 | 10/09/2024 | | Service line replacement work for IPUD in Septemb | 840-06 · Distribution System Maintenance | -1,392.32 |
| TOTAL | | | | | | -1,392.32 |
| **Bill Pmt -Check** | **60562** | **10/21/2024** | **Ramirez Tree Service & Landscaping** | | **1-103 · Bank of America 4809** | |
| Bill | | 10/16/2024 | | Tree work, Chipping, Dump runs | 1371-35 · Colby & Seahaven Tank Improve | -2,000.00 |
| TOTAL | | | | | | -2,000.00 |
| **Bill Pmt -Check** | **60563** | **10/21/2024** | **Amazon Capital Services** | **Portable Projector** | **1-103 · Bank of America 4809** | |
| Bill | 1QLR-TJCW-YKF\ | 10/13/2024 | | Portable Projector | 870-05 · Office Supplies | -166.26 |
| TOTAL | | | | | | -166.26 |
| **Bill Pmt -Check** | **60564** | **10/21/2024** | **Building Supply & Hardware** | | **1-103 · Bank of America 4809** | |
| Bill | 154044 | 08/30/2024 | | | 850-01 · Supplies & Inventory | -2.12 |

# Inverness Public Utility District
## Check Detail
### October 2024

| Type | Num | Date | Name | Memo | Account | Paid Amount |
|---|---|---|---|---|---|---|
| Bill | 154607 | 09/27/2024 | | Original amount is $ 677.75, but Jim Fox personal p | 850-01 · Supplies & Inventory | -218.43 |
| TOTAL | | | | | | -220.55 |
| **Bill Pmt -Check** | **60565** | **10/21/2024** | **AT&T CalNet** | **9/7/24 - 10/6/24 Phone & Internet** | **1-103 · Bank of America 4809** | |
| Bill | | 10/07/2024 | | F1, F3 Phone & F1 Internet | 870-01 · Telephone & Internet | -156.10 |
| | | | | Firehouse Phones and Fax | 870-01 · Telephone & Internet | -151.62 |
| | | | | Admin Phones | 870-01 · Telephone & Internet | -129.62 |
| TOTAL | | | | | | -437.34 |
| **Bill Pmt -Check** | **60566** | **10/28/2024** | **Amazon Capital Services** | | **1-103 · Bank of America 4809** | |
| Bill | 1YRD-WJCJ-GRQ | 10/20/2024 | | Large Envelopes, File Folders | 870-05 · Office Supplies | -114.44 |
| TOTAL | | | | | | -114.44 |
| **Bill Pmt -Check** | **60567** | **10/28/2024** | **California Special Districts Asso** | **Annual membership dues - Member 124** | **1-103 · Bank of America 4809** | |
| Bill | | 10/01/2024 | | January - June 2025 membership | 870-02 · Dues/Publications/Subscriptions | -2,925.48 |
| | | | | July - December 2025 membership | 146 - Other Prepaids | -2,925.52 |
| TOTAL | | | | | | -5,851.00 |
| **Bill Pmt -Check** | **60568** | **10/28/2024** | **Fire Safety Supply, Inc.** | | **1-103 · Bank of America 4809** | |
| Bill | 124365 | 10/17/2024 | | Sentry wall hanger | 870-05 · Office Supplies | -129.90 |
| | | | | Fire extinquisher maintenance | 840-01 · Equipment Maintenance | -105.00 |
| TOTAL | | | | | | -234.90 |
| **Bill Pmt -Check** | **60569** | **10/28/2024** | **McPhail Fuel Company** | **INVPUB** | **1-103 · Bank of America 4809** | |
| Bill | I026852 | 10/17/2024 | | | 840-10 · Admin Office Utilities | -5.00 |
| TOTAL | | | | | | -5.00 |
| **Bill Pmt -Check** | **60570** | **10/28/2024** | **Quill LLC** | | **1-103 · Bank of America 4809** | |
| Bill | 41006119 | 10/09/2024 | | Printer Ink | 870-05 · Office Supplies | -239.85 |
| Bill | 41006184 | 10/09/2024 | | Office Supplies | 870-05 · Office Supplies | -37.88 |
| TOTAL | | | | | | -277.73 |
| **Check** | **60571** | **10/22/2024** | **Paula Linton** | **Closed account refund 110-060-10 11 Inverness** | **1-103 · Bank of America 4809** | |
| | | | Paula Linton | Closed account refund 110-060-10 11 Inverness W | 130.1 · Customer Refunds | -12.46 |
| TOTAL | | | | | | -12.46 |

# Inverness Public Utility District
## CalCard Credit Card Report
### September 24 through October 22, 2024

| Type | Date | Name | Memo | Account | Split | Amount | Balance |
|---|---|---|---|---|---|---|---|
| **2670 · US Bank Cal Card** | | | | | | | |
| **CalCard xx0239 David Briggs** | | | | | | | |
| Credit Card Charge | 09/27/2024 | Redwood Oil | Fuel | CalCard xx0239 David Briggs | 860-01 · Vehicle Oil & Gas | 67.00 | 67.00 |
| Credit Card Charge | 09/27/2024 | Redwood Oil | Fuel | CalCard xx0239 David Briggs | 860-01 · Vehicle Oil & Gas | 75.00 | 142.00 |
| Credit Card Charge | 10/01/2024 | Costco Wholesale | Disaster Council Supplies | CalCard xx0239 David Briggs | 870-13 · Disaster Council | 209.60 | 351.60 |
| Credit Card Charge | 10/11/2024 | Mid-Valley Tractor Co. | Transport Delivery Fee - UTV | CalCard xx0239 David Briggs | 850-01 · Supplies & Inventory | 1,150.00 | 1,501.60 |
| Credit Card Charge | 10/17/2024 | U. S. Postal Service | MWPA Defensible Space Letters Postage | CalCard xx0239 David Briggs | 870-05 · Office Supplies | 15.24 | 1,516.84 |
| Bill | 10/22/2024 | U. S. Bank Bancorp Purchashing Card Prog | D Briggs | CalCard xx0239 David Briggs | 20000 · Accounts Payable | -1,516.84 | 0.00 |
| Total CalCard xx0239 David Briggs | | | | | | 0.00 | 0.00 |
| **CalCard xx6591 Jim Fox** | | | | | | | |
| Credit Card Charge | 09/24/2024 | Palace Market | Drill Supplies | CalCard xx6591 Jim Fox | 843-01 · Volunteer Appreciation | 55.59 | 55.59 |
| Credit Card Charge | 09/28/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 69.33 | 124.92 |
| Credit Card Charge | 10/01/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 60.03 | 184.95 |
| Credit Card Charge | 10/01/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 75.00 | 259.95 |
| Credit Card Charge | 10/06/2024 | Unication USA Inc. | Lithium Batteries, Supplies | CalCard xx6591 Jim Fox | 830-02 · Commo Supplies | 267.90 | 527.85 |
| Credit Card Credit | 10/07/2024 | Adobe | Credit for account switch | CalCard xx6591 Jim Fox | 850-01 · Supplies & Inventory | -5.17 | 522.68 |
| Credit Card Charge | 10/09/2024 | Redwood Oil | Fuel for Gas Cans | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 13.00 | 535.68 |
| Credit Card Charge | 10/09/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 50.67 | 586.35 |
| Credit Card Charge | 10/09/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 65.06 | 651.41 |
| Credit Card Charge | 10/09/2024 | Brenntag Pacific Inc. | Sodium Hydroxide | CalCard xx6591 Jim Fox | 850-01 · Supplies & Inventory | 1,185.78 | 1,837.19 |
| Credit Card Charge | 10/10/2024 | Petaluma Chevron | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 66.54 | 1,903.73 |
| Credit Card Charge | 10/13/2024 | Bovine Bakery | Drill Supplies | CalCard xx6591 Jim Fox | 843-01 · Volunteer Appreciation | 33.90 | 1,937.63 |
| Credit Card Charge | 10/13/2024 | Palace Market | Drill Supplies | CalCard xx6591 Jim Fox | 843-01 · Volunteer Appreciation | 78.33 | 2,015.96 |
| Credit Card Charge | 10/13/2024 | Polaris | UTV Parts | CalCard xx6591 Jim Fox | 850-01 · Supplies & Inventory | 313.14 | 2,329.10 |
| Credit Card Charge | 10/18/2024 | Vevor | Supplies | CalCard xx6591 Jim Fox | 850-01 · Supplies & Inventory | 25.97 | 2,355.07 |
| Credit Card Charge | 10/18/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 53.49 | 2,408.56 |
| Credit Card Charge | 10/18/2024 | Redwood Oil | Fuel | CalCard xx6591 Jim Fox | 860-01 · Vehicle Oil & Gas | 55.83 | 2,464.39 |
| Bill | 10/22/2024 | U. S. Bank Bancorp Purchashing Card Prog | J. Fox | CalCard xx6591 Jim Fox | 20000 · Accounts Payable | -2,464.39 | 0.00 |
| Total CalCard xx6591 Jim Fox | | | | | | 0.00 | 0.00 |
| **CalCard xx7757 S. Redding** | | | | | | | |
| Credit Card Charge | 09/24/2024 | U. S. Postal Service | Postage - CalPERS Resolution | CalCard xx7757 S. Redding | 870-05 · Office Supplies | 1.77 | 1.77 |
| Credit Card Charge | 09/25/2024 | U. S. Postal Service | Postage | CalCard xx7757 S. Redding | 870-05 · Office Supplies | 28.50 | 30.27 |
| Credit Card Charge | 09/26/2024 | Inverness Park Market | Employee lunch - benefits | CalCard xx7757 S. Redding | 870-14 · Miscellaneous | 127.73 | 158.00 |
| Credit Card Charge | 09/30/2024 | FedEx Printing | Postage charge for UTV Payment | CalCard xx7757 S. Redding | 870-05 · Office Supplies | 9.75 | 167.75 |
| Credit Card Charge | 09/30/2024 | San Francisco Chronicle | Monthly subscription | CalCard xx7757 S. Redding | 870-02 · Dues/Publications/Subscript | 15.96 | 183.71 |
| Credit Card Charge | 10/07/2024 | Adobe | 2 Annual Subscription Purchases | CalCard xx7757 S. Redding | -SPLIT- | 575.76 | 759.47 |
| Credit Card Charge | 10/08/2024 | Adobe | 2 annual subscription purchases | CalCard xx7757 S. Redding | -SPLIT- | 570.66 | 1,330.13 |
| Credit Card Charge | 10/08/2024 | Adobe | 1 Annual subscription purchase | CalCard xx7757 S. Redding | -SPLIT- | 285.33 | 1,615.46 |
| Credit Card Charge | 10/10/2024 | Marin Independent Journal | Annual subscription | CalCard xx7757 S. Redding | -SPLIT- | 214.84 | 1,830.30 |
| Bill | 10/22/2024 | U. S. Bank Bancorp Purchashing Card Prog | S. Redding | CalCard xx7757 S. Redding | 20000 · Accounts Payable | -1,830.30 | 0.00 |
| Total CalCard xx7757 S. Redding | | | | | | 0.00 | 0.00 |
| Total 2670 · US Bank Cal Card | | | | | | 0.00 | 0.00 |
| **TOTAL** | | | | | | **0.00** | **0.00** |

# Inverness Public Utility District
## Payroll Expenses
### October 2024

| | Water | | District | TOT Expenses | Fire - Other | Total Fire | | |
|---|---|---|---|---|---|---|---|---|
| | (Enterprise Fund) | Total Enterprise Fund | (General Fund) | (Fire) | (Fire) | (General Fund) | Total General Fund | TOTAL |
| **Expense** | | | | | | | | |
| **810 · Personnel Costs** | | | | | | | | |
| **810-01 · Management Wages** | 5,215.60 | 5,215.60 | 9,981.82 | 0.00 | 5,215.60 | 5,215.60 | 15,197.42 | 20,413.02 |
| **810-02 · Operations Wages** | 20,690.72 | 20,690.72 | 0.00 | 4,195.16 | 0.00 | 4,195.16 | 4,195.16 | 24,885.88 |
| **810-03 · Administrative Wages** | 3,196.25 | 3,196.25 | 4,451.26 | 0.00 | 0.00 | 0.00 | 4,451.26 | 7,647.51 |
| **810-04 · Employers Payroll Tax** | 1,500.91 | 1,500.91 | 1,812.35 | 278.32 | 401.73 | 680.05 | 2,492.40 | 3,993.31 |
| **810-06 · Duty Officer Stpend** | 0.00 | 0.00 | 0.00 | 0.00 | 250.00 | 250.00 | 250.00 | 250.00 |
| **810-09 · Health Ins in Lieu** | 0.00 | 0.00 | 1,060.00 | 0.00 | 0.00 | 0.00 | 1,060.00 | 1,060.00 |
| **810-10 · Retirement Premiums** | 3,344.14 | 3,344.14 | 2,911.11 | 0.00 | 2,144.50 | 2,144.50 | 5,055.61 | 8,399.75 |
| **Total 810 · Personnel Costs** | 33,947.62 | 33,947.62 | 20,216.54 | 4,473.48 | 8,011.83 | 12,485.31 | 32,701.85 | 66,649.47 |
| **Total Expense** | 33,947.62 | 33,947.62 | 20,216.54 | 4,473.48 | 8,011.83 | 12,485.31 | 32,701.85 | 66,649.47 |
| **Net Income** | **-33,947.62** | **-33,947.62** | **-20,216.54** | **-4,473.48** | **-8,011.83** | **-12,485.31** | **-32,701.85** | **-66,649.47** |

Inverness Public Utility District
Board Meeting

# Agenda Item No. 5

## Reports

Receive Reports On Administrative and Operational Activities for October 2024

A. General Manager's Reports
B. Operations Reports

**Inverness Public Utility District**

**Cash on Hand Statement**

| | | | |
|---|---|---|---|
| **DISTRICT** | Cash in Bank of America, Acct. 0150 | $68,300.95 | |
| | Cash in Bank of America, Acct. 4089 | $49,115.99 | |
| | Cash in County | $3,982.59 | |
| | **Total Cash in Banks** | | **$121,399.53** |
| | LAIF - Uncommitted Funds | $31,365.48 | |
| | LAIF - Committed Funds (*see below*) | $283,826.92 | |
| | LAIF - Assigned Funds | $95,615.00 | |
| | **Total LAIF Funds for District** | | **$410,807.40** |
| **WATER** | LAIF - Uncommited Funds | $638,164.10 | |
| | LAIF - Committed Funds (*see below*) | $566,147.51 | |
| | **Total LAIF Funds for Water** | | **$1,204,311.61** |
| **FIRE** | LAIF - Uncommitted Funds | $0.00 | |
| | LAIF - Committed Funds (*see below)* | $558,893.02 | |
| | LAIF - Assigned Funds | $1,604,904.00 | |
| | **Total LAIF Funds for Fire** | | **$2,163,797.02** |
| | **Total Cash in Banks** | **$121,399.53** | |
| | **Total LAIF Funds @ 10/31/24** | **$3,778,916.03** | |
| | **Total Cash on Hand @ 10/31/24** | | **$3,900,315.56** |
| | **Water Customers Accounts Receivable** | **$118,989.25** | |

**Local Agency Investment Fund (LAIF)**

**Current Rate: 4.518%** **Rate Last Quarter: 4.480%** **Rate 1 Year Ago: 3.670%**

| **DISTRICT** | |
|---|---|
| **LAIF Total:** | |
| **Committed Funds** | |
| Emergency Reserves | $20,402.64 |
| CalPERS Liability | $263,424.28 |
| **Total Committed** | **$283,826.92** |

| **WATER** | |
|---|---|
| **LAIF Total:** | |
| **Committed Funds** | |
| Main Replacement | $27,275.73 |
| Tank Replacement | $137,990.28 |
| Vehicle Replacement | $15,034.08 |
| Emergency Reserves | $336,514.35 |
| CalPERS Liability | $9,333.07 |
| Trossach Road Rehab. | $40,000.00 |
| **Total Committed** | **$566,147.51** |

| **FIRE** | |
|---|---|
| **LAIF Total:** | |
| **Committed Funds** | |
| Equipment Replacement | $81,827.20 |
| Vehicle Replacement | $54,551.47 |
| Emergency Reserves | $422,514.35 |
| **Total Committed** | **$558,893.02** |

Inverness Public Utility District
Investment Reserves Report

October 31, 2024

| Reserve Funds | Percentage of Interest | 6/30/24 Balance | 2024/2025 Allocated | 2023/2024 Interest + 9/30/24 Interest | 10/31/24 Balance |
|---|---|---|---|---|---|
| **District** | | | | | |
| LAIF Uncommitted Funds | 0.83% | $31,365.48 | $31,365.48 | $864.41 | $32,229.89 |
| LAIF Assigned Funds | 2.53% | $95,615.00 | $95,615.00 | $2,635.08 | $98,250.08 |
| LAIF Committed Funds | | | | | |
| Emergency Reserves | 0.54% | $20,402.64 | $20,402.64 | $562.28 | $20,964.92 |
| CalPERS Liability | 6.97% | $263,424.28 | $263,424.28 | $7,259.78 | $270,684.06 |
| **Total LAIF Funds in District** | **10.87%** | **$410,807.40** | **$410,807.40** | **$11,321.55** | **$422,128.95** |
| **Water** | | | | | |
| LAIF Uncommitted Funds * | 16.89% | $838,938.31 | $638,164.10 | $17,587.33 | $655,751.43 |
| LAIF Committed Funds | | | | | |
| Main Replacement | 0.72% | $27,275.73 | $27,275.73 | $751.70 | $28,027.43 |
| Tank Replacement | 3.65% | $137,990.28 | $137,990.28 | $3,802.91 | $141,793.19 |
| Vehicle Replacement | 0.40% | $15,034.08 | $15,034.08 | $414.33 | $15,448.41 |
| Emergency Reserves | 8.91% | $336,514.35 | $336,514.35 | $9,274.09 | $345,788.44 |
| CalPERS Liability | 0.25% | $9,333.07 | $9,333.07 | $257.21 | $9,590.28 |
| Trossach Road Rehab. | 1.06% | $40,000.00 | $40,000.00 | $1,102.37 | $41,102.37 |
| **Total LAIF Funds in Water** | **31.87%** | **$1,405,085.82** | **$1,204,311.61** | **$33,189.93** | **$1,237,501.54** |
| **Fire** | | | | | |
| LAIF Uncommitted Funds | | $0.00 | $0.00 | $0.00 | $0.00 |
| LAIF Assigned Funds | 42.47% | $1,604,904.00 | $1,604,904.00 | $44,229.96 | $1,649,133.96 |
| LAIF Committed Funds | | | | | |
| Equipment Replacement | 2.17% | $81,827.20 | $81,827.20 | $2,255.10 | $84,082.30 |
| Vehicle Replacement | 1.44% | $54,551.47 | $54,551.47 | $1,503.40 | $56,054.87 |
| Emergency Reserves | 11.18% | $422,514.35 | $422,514.35 | $11,644.18 | $434,158.53 |
| **Total LAIF Funds in Fire** | **57.26%** | **$2,163,797.02** | **$2,163,797.02** | **$59,632.64** | **$2,223,429.66** |
| **Total LAIF Funds** | **100.00%** | **$3,979,690.24** | **$3,778,916.03** | **$104,144.12** | **$3,883,060.15** |

*Inverness Public Utility District's (District) Investment Policy dated September 26, 2012 describes the District's commitment to managing risk by selecting investment products based on safety, liquidity, and yield. Per California Government Code Section 53600 et seq., specifically Section 53646 and Section 53607, this investment report discloses all investment related activity in the current period. District investable funds are currently invested in California's Local Agency Investment Fund (LAIF) which meets those standards; the individual investment transactions of the CA Class Pool are not reportable under the Government Code. That being said, the District's Investment Policy remains a prudent investment course, and is in compliance with the "Prudent Investor's Policy" designed to protect public funds.*

**Inverness Public Utility District (Inverness Fire) Measure W (TOT) Activity Summary FY 2023-2024**

| | | |
|---|---|---|
| Income: | | 119,898.10 |
| Expenses | Personnel | 83,562.84 |
| | Equipment | 19,833.94 |
| Total Expenses | | 103,396.78 |
| **Net Income (Carryover)** | | **16,501.32** |

# Inverness Public Utility District
## Revenue Detail Measure W (TOT) Detail
### July 2023 through June 2024

| | Type | Date | Num | Name | Memo | Class | Clr | Split | Amount | Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| **Income** | | | | | | | | | | |
| **650 · Restricted Agency Funds** | | | | | | | | | | |
| **650-01 · TOT Revenue (Meas W)** | | | | | | | | | | |
| | Deposit | 12/28/2023 | 197820 | Treasurer - County of Marin | January 2023 - June 2023 TOT Distribution | General Fund:Fire | | 1-103 · Bank of America 4809 | 48,532.60 | 48,532.60 |
| | Deposit | 06/04/2024 | | Treasurer - County of Marin | TOT Funds Collected - 7/1/23 - 12/31/23 | General Fund:Fire | | 1-103 · Bank of America 4809 | 71,365.50 | 119,898.10 |
| Total 650-01 · TOT Revenue (Meas W) | | | | | | | | | 119,898.10 | 119,898.10 |
| Total 650 · Restricted Agency Funds | | | | | | | | | 119,898.10 | 119,898.10 |
| Total Income | | | | | | | | | 119,898.10 | 119,898.10 |
| Gross Profit | | | | | | | | | 119,898.10 | 119,898.10 |

# Inverness Public Utility District
## Profit & Loss Detail Measure W (TOT)
### July 2023 through June 2024

| Type | Date | Num | Name | Memo | Class | Clr | Split | Amount | Balance |
|---|---|---|---|---|---|---|---|---|---|
| **Expense** | | | | | | | | | |
| **810 · Personnel Costs** | | | | | | | | | |
| **810-02 · Operations Wages** | | | | | | | | | |
| General Journal | 07/15/2023 | PR-A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 1,975.26 | 1,975.26 |
| General Journal | 07/31/2023 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 3,998.58 |
| General Journal | 08/15/2023 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 6,021.90 |
| General Journal | 08/31/2023 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 8,045.22 |
| General Journal | 09/15/2023 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 10,068.54 |
| General Journal | 09/29/2023 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 12,091.86 |
| General Journal | 10/13/2023 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 14,115.18 |
| General Journal | 10/31/2023 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 16,138.50 |
| General Journal | 11/15/2023 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 18,161.82 |
| General Journal | 11/30/2023 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 20,185.14 |
| General Journal | 12/15/2023 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 22,208.46 |
| General Journal | 12/29/2023 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 24,231.78 |
| General Journal | 01/13/2024 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 26,255.10 |
| General Journal | 01/31/2024 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 28,278.42 |
| General Journal | 02/15/2024 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 30,301.74 |
| General Journal | 02/29/2024 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 32,325.06 |
| General Journal | 03/15/2024 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 34,348.38 |
| General Journal | 03/29/2024 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 36,371.70 |
| General Journal | 04/15/2024 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 38,395.02 |
| General Journal | 04/30/2024 | PR - B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 40,418.34 |
| General Journal | 05/15/2024 | PR - A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 42,441.66 |
| General Journal | 05/31/2024 | PR-B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 44,464.98 |
| General Journal | 06/14/2024 | PR-A | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 46,488.30 |
| General Journal | 06/28/2024 | PR-B | David Briggs - PR | Salary - Asst Fire Chief | General Fund:Fire:TOT Expenses | | 1-103 · Bank of America 4809 | 2,023.32 | 48,511.62 |
| Total 810-02 · Operations Wages | | | | | | | | 48,511.62 | 48,511.62 |
| **810-07 · Health Insurance** | | | | | | | | | |
| General Journal | 07/10/2023 | TOT AJE-1 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 1,976.44 | 1,976.44 |
| General Journal | 08/10/2023 | TOT AJE-2 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 1,976.44 | 3,952.88 |
| General Journal | 09/10/2023 | TOT AJE-3 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 1,976.44 | 5,929.32 |
| General Journal | 10/16/2023 | TOT AJE-4 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 1,976.44 | 7,905.76 |
| General Journal | 11/14/2023 | TOT AJE-5 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 1,976.44 | 9,882.20 |
| General Journal | 12/14/2023 | TOT AJE-6 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 1,976.44 | 11,858.64 |
| General Journal | 01/10/2024 | TOT AJE-7 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 2,098.80 | 13,957.44 |
| General Journal | 02/10/2024 | TOT AJE-8 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 2,098.80 | 16,056.24 |
| General Journal | 03/10/2024 | TOT AJE-9 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 2,098.80 | 18,155.04 |
| General Journal | 04/10/2024 | TOT AJE-10 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 2,098.80 | 20,253.84 |
| General Journal | 05/10/2024 | TOT AJE-11 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 2,098.80 | 22,352.64 |
| General Journal | 06/10/2024 | TOT AJE-12 | CalPERS Health | To allocate monthly health expens | General Fund:Fire:TOT Expenses | | 810-07 · Health Insurance | 2,098.80 | 24,451.44 |
| Total 810-07 · Health Insurance | | | | | | | | 24,451.44 | 24,451.44 |
| **810-10 · Retirement Premiums** | | | | | | | | | |
| Bill | 07/31/2023 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 873.69 | 873.69 |
| Bill | 08/31/2023 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 1,757.88 |
| Bill | 09/29/2023 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 2,642.07 |
| Bill | 10/10/2023 | | CalPERS Retirement | Void | General Fund:Fire | √ | 20000 · Accounts Payable | 0.00 | 2,642.07 |

# Inverness Public Utility District
## Profit & Loss Detail Measure W (TOT)
### July 2023 through June 2024

| Type | Date | Num | Name | Memo | Class | Clr | Split | Amount | Balance |
|---|---|---|---|---|---|---|---|---|---|
| Bill | 10/31/2023 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 3,526.26 |
| Bill | 11/30/2023 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 4,410.45 |
| Bill | 12/29/2023 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 5,294.64 |
| Bill | 01/30/2024 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 6,178.83 |
| Bill | 03/05/2024 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 7,063.02 |
| Bill | 03/28/2024 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 7,947.21 |
| Bill | 05/03/2024 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 8,831.40 |
| Bill | 05/15/2024 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 9,715.59 |
| Bill | 06/24/2024 | | CalPERS Retirement | 25404 | General Fund:Fire | | 20000 · Accounts Payable | 884.19 | 10,599.78 |
| Total 810-10 · Retirement Premiums | | | | | | | | 10,599.78 | 10,599.78 |
| Total 810 · Personnel Costs | | | | | | | | 83,562.84 | 83,562.84 |
| Total Expense | | | | | | | | 83,562.84 | 83,562.84 |

# Inverness Public Utility District
## Transaction Detail Measure W (TOT) Supplies and Services
### July 2023 through June 2024

| Type | Date | Num | Name | Memo | Class | Clr | Split | Amount | Balance |
|---|---|---|---|---|---|---|---|---|---|
| **Expense** | | | | | | | | | |
| **850 Supplies & Inventory** | | | | | | | | | |
| **850-01 · Supplies & Inventory** | | | | | | | | | |
| Bill | 11/17/2023 | 180999 | Kenco Fire Equipment | Super Vacuum, Makita Battery PPV 16" Venting | General Fund:Fire:TOT Expenses | | 2000 - Accounts Payable | 4,310.00 | 4,310.00 |
| Credit Card Charge | 11/17/2023 | | Home Depot | 40V Cordless Safety Work Light | General Fund:Fire:TOT Expenses | | CalCard xx0239 David Briggs | 410.27 | 4,720.27 |
| Credit Card Charge | 12/03/2023 | | Amazon-Credit Card Chgs | Makita 16" Chainsaw Kit w/ 4 Batteries | General Fund:Fire:TOT Expenses | | CalCard xx0239 David Briggs | 478.87 | 5,199.14 |
| Bill | 09/01/2023 | | Stinson Beach Fire Protection Dis | 10 SCBA's, 5 Masks (AFG Grant Share) | General Fund:Fire:TOT Expenses | | 2000 - Accounts Payable | 8,776.45 | 13,975.59 |
| Bill | 12/14/2023 | 252513 | All Star Fire Equipment Inc. | Scott 200954-12 RIT III, 4500 PSI (10 SCBA's)E | General Fund:Fire:TOT Expenses | | 2000 - Accounts Payable | 3,804.99 | 17,780.58 |
| Credit Card Charge | 12/30/2023 | | Home Depot | Lithium-ion Safety Light | General Fund:Fire:TOT Expenses | | CalCard xx0239 David Briggs | 334.49 | 18,115.07 |
| Total 850-01 · Supplies & Inventory | | | | | | | | 18,115.07 | 18,115.07 |
| Total 850 Supplies & Inventory | | | | | | | | 18,115.07 | 18,115.07 |
| **870 Administration** | | | | | | | | | |
| **870-01 · Telephone & Internet** | | | | | | | | | |
| Bill | 07/01/2023 | 287322251032X07092023 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 140.96 | 140.96 |
| Bill | 08/01/2023 | 287322251032X08092023 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 140.96 | 281.92 |
| Bill | 09/01/2023 | 287322251032X09092023 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 140.96 | 422.88 |
| Bill | 10/01/2023 | 287322251032X10092023 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 141.27 | 564.15 |
| Bill | 11/01/2023 | 287322251032X11092023 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 141.27 | 705.42 |
| Bill | 12/01/2023 | 287322251032X12092023 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 141.27 | 846.69 |
| Bill | 12/29/2023 | 287322251032X01092024 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 141.66 | 988.35 |
| Bill | 02/01/2024 | 287322251032X02092024 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 141.38 | 1,129.73 |
| Bill | 03/21/2024 | 287322251032X03092024 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 150.27 | 1,280.00 |
| Bill | 04/01/2024 | 287322251032X04092024 | AT&T Mobility | Void | General Fund:Fire:TOT Expenses | √ | 20000 · Accounts Payable | 0.00 | 1,280.00 |
| Bill | 04/01/2024 | 287322251032X04092024 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 146.29 | 1,426.29 |
| Bill | 05/01/2024 | 287322251032X05092024 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 146.29 | 1,572.58 |
| Bill | 06/07/2024 | 287322251032X06092024 | AT&T Mobility | First Net Fire and Disaster Council | General Fund:Fire:TOT Expenses | | 20000 · Accounts Payable | 146.29 | 1,718.87 |
| Total 870-01 · Telephone & Internet | | | | | | | | 1,718.87 | 1,718.87 |
| Total 870 Administration | | | | | | | | 1,718.87 | 1,718.87 |
| **TOTAL** | | | | | | | | **19,833.94** | **19,833.94** |

*Inverness Public Utility District*

# Board Agenda Item Staff Report

Subject: Grants and Projects Report
Meeting Date: November 19, 2024
Date Prepared: November 15, 2024
Prepared by: Jenna Nicolas, Grants and Projects Manager
Attachments: None

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**Recommended Action: None, Informational**

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## MWPA CORE Grant

With the use of the MWPA CORE Funds Grant of $35,000, IPUD was successful in purchasing an electric Polaris UTV for vegetation removal in the watershed areas. The vehicle was put into service upon delivery and has been a benefit to access tight access areas and terrain with less disturbance to the environment.

## Holiday Fundraiser

David and Jenna have been working with local artist and designer Nicole Lavelle to kickstart a fundraiser for the fire department. The proceeds will go to replace one complete set of turnout gear for the volunteers. We hope to do this twice a year and connect with a local community member(s) for the design and artwork of limited edition IVFD logo merchandise. Be sure to stop by the table at the Dance Palace during the Holiday Craft Fair December 6th - 8th or email David once the mugs and tee shirts become available. If you know of any local artists who would be a good fit for this project, or if you yourself would like to submit design work, please have them reach out to Jenna or David.

## FEMA Assistance to Firefighters Grant

The grant has opened earlier than expected and has a short application window, but we are well prepared to complete the application on time. Jenna is working on our application package for FY 2024 which includes new turnouts, a source capture exhaust system, new fire hose, and a Type 6 wildland engine. The total application package will be approximately $545,000. Jenna is aiming to have the application submitted by December 6th , 2024, and the results will start to be announced in May 2025.

## Cybersecurity Grant

This application is being put off until the SCADA project has clear parameters and pricing. Although we will wait until the next application round to apply through CalOES for the State and Local Cybersecurity Grant, we are still looking for and reviewing grant opportunities to replace IPUD servers.

In case there isn't a December meeting, have a safe and fun holiday season and hopefully see you all in March 2025!

*Inverness Public Utility District*

# Board Agenda Item Staff Report

| | |
|---|---|
| Subject: | Colby & Seahaven Tank Replacement Project |
| Meeting Date: | Tuesday, November 19, 2024 |
| Date Prepared: | October 29, 2024 |
| Prepared by: | Shelley Redding, General Manager |
| Attachments: | Sol Ecology Environmental Report Colby Site; Colby Tank Site Plans; Seahaven Tank Site Plans |

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**Recommended Action: Informational**

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**Background:**

The Colby/Seahaven Tank Replacement Project is being funded by a State Department of Water Resources Grant award of $1.2 million dollars. The grant was awarded to fulfill the goal of increasing the water system's drought resiliency by replacing the last redwood water tanks in the system. The Seahaven tank site has one 15,000-gallon tank, and the Colby site had four 10,000-gallon tanks. These tanks have been in place for nearly 40 years and are past their useful life. They are now showing signs of failure with numerous leaks which are becoming harder to repair.

Since the award was announced, staff have been working with Brelje & Race Engineers to accomplish the various tasks related to the CEQA exemption, including the environmental and cultural documentation for both tank sites. In late August 2024 Staff prepared two permit applications, one for each site. The Colby site, according to the environmental report, requires a permit to remove two heritage Coast Live Oak trees from the IPUD owned tank site, along with a permit application for the tank replacement. Since Marin County has now updated their permit application requirements, the tank site plans are required to be submitted with the tank permit. The tree removal permit must now be filed together with the tank permit, which has delayed the permit application submission until the required elements are completed.

Staff has reported to the Board previously that neighboring property owners of both tank sites have been provided consultation concerning the project as it has progressed. In October 2023, staff were given a list of requests concerning the Colby Tank Site. The items listed prioritized safety concerns and requested mitigation efforts that, if not addressed, could affect their property adversely. Other items were more aesthetic in nature, but nonetheless important for consideration. At the time the CEQA exemption documentation was completed, and an exemption was filed, the property owners next to the Colby Tank Site verbally requested that the District consider not removing the trees based on their designation as Heritage Trees. The property owners would rather have the trees preserved for their views and enjoyment.

While the engineers are aware of the concerns raised by the Colby Tank Site property owners, the design of the tank for the site must conform to seismic and safety standards for the unique location and to align with the focus of the state grant to improve drought resiliency, maintain existing storage capacity and ensure adequate water supply for structural fire protection. Both trees currently overhang the existing tanks and pose a risk that would be unwise to continue to exist with new tanks, and excavating for the new tank foundation would increase the risk of the trees failing since Live Oaks have a history of looking healthy and failing catastrophically.

# BIOLOGICAL RESOURCES REPORT

## Colby Water Tank Replacement Project
## Inverness, Marin County, CA

**Prepared For:**

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**Prepared On:**

June 24, 2024

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**TABLE OF CONTENTS**



**LIST OF APPENDICES**

## LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| BMP | Best Management Practice |
| CDFG/CDFW | California Department of Fish and Game/Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFGC | California Fish and Game Code |
| CNDDB | California Natural Diversity Database |
| CNPS | California Native Plant Society |
| DPS | Distinct Population Segment |
| ESA | Federal Endangered Species Act |
| ESCP | Erosion Sediment Control Plan |
| MBTA | Migratory Bird Treaty Act |
| NMFS | National Marine Fisheries Service |
| NOAA | National Oceanic and Atmospheric Administration |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| RWQCB | Regional Water Quality Control Board |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |
| USGS | U.S. Geological Service |
| USFWS | U.S. Fish and Wildlife Service |
| WBWG | Western Bat Working Group |

## 1.0 INTRODUCTION

The Colby Water Tank Replacement Project (Project) entails the removal of three old wooden water tanks and the placement of one larger, new metal water tank. On February 2, 2024, Sol Ecology, Inc. performed a biological resources assessment at the Project location (Project Study Area). The Project Study Area includes the entire parcel wherein the water tanks are located and the surrounding habitat subject to potential direct and indirect effects of the proposed Project. The three existing wooden water tanks are located at the north end of the property, at the point furthest from the roadway of Perth Way (Appendix A – Figure 1). The purpose of the Project is to replace the three wooden water tanks, which are beginning to leak or are otherwise damaged, with a single new water tank in order to improve the retention of water stored at the location.

The purpose of this assessment was to gather information necessary to complete a review of potential biological resource impacts from development of the proposed Project, under the County of Marin's guidelines regarding the California Environmental Quality Act (CEQA). This report describes the results of the site assessment of the Project Study Area for the presence of sensitive biological resources protected by local, state, and federal laws and regulations, including the Marin County Local Coastal Program (LCP). This report also contains an evaluation of potential impacts to sensitive biological resources that may occur from the proposed Project. This assessment is based on information available at the time of the study and on-site conditions that were observed on the date of the site visit.

### 1.1 Project Location and Setting

The Project Study Area is in the census designated place of Inverness, in Marin County. Regional access to the site from the north or south is provided by California State Route 1 (SR 1), and from the east by Point Reyes-Petaluma Road and/or Sir Francis Drake Boulevard. Inverness is located along the western shore of Tomales Bay, northwest of the unincorporated community of Point Reyes Station. Land uses surrounding the Project Study Area consist of single-family residences. Sir Francis Drake Boulevard, located to the east of the Project Study Area, is a major traffic artery linking SR 1 with Inverness. Residences, businesses, and beaches are located along this segment of Sir Francis Drake Boulevard.

The Project Study Area consists of a single parcel (APN 112-262-06) between the properties located at 50 Perth Way, and 70 Perth Way and the adjacent right-of-way. The parcel within the Project Study Area does not have its own address and is zoned as C-RSP-1 – Coastal, Residential, Single-Family Planned (1 unit per acre). The land use of the parcel is noted as "Tax Exempt".

### 1.2 Project Description

There are four existing tanks at the Project Study Area. One of these, an existing 130,000-gallon bolted steel tank, is in serviceable condition and will be retained. The other three existing water tanks are at the end of their service life and also leak. These three tanks are smaller, each providing approximately 10,000 gallons of storage, are made of wood, and are placed at the northern end of the parcel. The wooden tanks would be replaced by an approximately 30,000-

gallon bolted steel tank that would have a height of 12 feet, similar to the existing redwood tanks it would replace, and a 30-foot diameter. Appurtenances and minor piping installation would be required to tie the replacement tank into the existing water system, and all improvements would occur within the existing fenced and maintained tank site. The Project would require the removal of a 24-inch coast live oak tree and 36-inch coast live oak tree to accommodate the tank footprint and foundation. Both trees are considered Heritage Trees under the Marin County Local Coastal Plan, and a coastal development permit will be required for their removal. Work will be initiated outside the nesting bird season which lasts from February 1 to August 31, to ensure compliance with applicable laws and regulations. If there is a lapse in activities or delay in the start of any activity, pre-construction surveys will be performed in accordance with relevant survey protocols.

## 2.0 METHODS

On February 2, 2024, and May 16, 2024, the Project Study Area was traversed on foot to determine the presence of (1) plant communities both sensitive and non-sensitive, (2) special status plant and wildlife species, and (3) presence of essential habitat elements for any special-status plant or wildlife species. Photographs of the site are provided in Appendix B. Species identified during the site visit are provided in Appendix C.

### 2.1 Literature Review

Prior to the site visit, a desktop analysis was performed to evaluate whether special status species or other sensitive biological resources (e.g., wetlands) could occur in the Project Study Area and vicinity. Sol Ecology biologists reviewed the following:

- California Native Plant Society's (CNPS's) A Manual of California Vegetation Online Edition (CNPS 2024a)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory, Wetlands Mapper (USFWS 2024a)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2019)
- CNPS's Inventory of Rare and Endangered Plants of California search for U.S. Geological Survey (USGS) 7.5-minute quadrangle San Rafael and the seven surrounding quadrangles, Novato, Petaluma Point, San Quentin, San Francisco North, Point Bonita, San Geronimo, and Bolinas (CNPS 2024b)
- California Natural Diversity Database (CNDDB) search for USGS 7.5-minute quadrangle San Rafael and the seven surrounding quadrangles, Novato, Petaluma Point, San Quentin, San Francisco North, Point Bonita, San Geronimo, and Bolinas (CDFW 2024, Appendix D)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2024b; Appendix D)

- California Department of Fish and Game (CDFG) publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication *California Bird Species of Special Concern* (Shuford and Gardali 2008)
- California Department of Fish and Wildlife (CDFW) and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)
- Western Bat Working Group (WBWG) Online Species Accounts (WBWG 2015).

**2.2 Field Survey**

The Project Study Area was evaluated for the presence of sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW, County-mapped riparian corridors, habitat connectivity corridors, scenic corridors, and Environmentally Sensitive Habitat Areas (ESHA) regulated by the California Coastal Commission under the Marin County Local Coastal Program. Sensitive communities were identified following A Manual of California Vegetation, Online Edition and includes California Wildlife Habitat Relationships habitat classifications.

The Project Study Area was also surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), California Coastal Commission (CCC) or CDFW are present. This preliminary assessment was based primarily on the presence of wetland plant indicators, hydrology, or wetland soils. A preliminary waters assessment was based on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high-water mark or a defined drainage course.

Sol Ecology biologists also performed reconnaissance-level surveys for special status species on and adjacent to the Project Study Area on February 2, 2024. The focus of the surveys was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present on the Project Study Area or not and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined for the potential presence of sensitive plant species included: soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat.

Protocol-level surveys for special-status plants with potential to occur were also performed on May 16, 2024, in accordance with CDFW protocol (CDFW 2023). The entire Project Study Area and the adjacent areas were traversed on foot and all observed plant species were recorded and identified with Jepson eFlora (Jepson Flora Project, 2024) to a taxonomic level sufficient to determine rarity. All observed plant species were recorded, and the results of the survey incorporated into this report.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special-status species was observed during the site visit, its presence is recorded and discussed. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

## 3.0 RESULTS

### 3.1 Existing Conditions and General Wildlife Use

Elevations within the Project Study Area range from approximately 61 to 70 meters (200 to 230 feet) above mean sea level. The Project Study Area encompasses one soil map unit identified by the USDA, NRCS (USDA 2019):

- **Sheridan variant coarse sandy loam, 50 to 75 percent slopes:** This soil map unit consists of soils that are well drained and somewhat deep. The soil parent material is residuum weathered from quartz-diorite, and it forms on hill slopes. Vegetation this soil typically supports consists of annual grasses and forbs, oak trees, and some brush. This soil is not rated as hydric. Minor components include Unnamed, gravelly loam soils (2%), Kehoe variant (2%), Inverness (2%), rock outcrop (2%), Unnamed, shallow (2%), and Kehoe (2%).

Vegetation communities present in the Project Study Area were classified based on existing plant community descriptions described in the California Native Plant Society Online Manual of California Vegetation (CNPS 2022a). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Vegetation communities were classified as non-sensitive or sensitive natural communities as defined by CEQA and other applicable laws and regulations.

<u>Coast Live Oak Woodland and Forest</u>

Coast live oak woodland and forest (*Quercus agrifolia* forest and woodland alliance) is present throughout the Project Study Area and the surrounding habitat. However, due to the adjacent residential development and the disturbances associated with the installation of the existing water tanks, the coast live oak woodland and forest present within the Project Study Area has deviated from the typical conditions found in this alliance. As such, the species composition of this alliance differs slightly from what would be found in a more pristine habitat, with some of the tree canopy and understory species having been supplanted with species not indicative of this alliance. This alliance has a global rank of G5 and a state rank of S4, meaning it is not a sensitive vegetation community.

Several native trees are present adjacent to the boundaries of the Project Study Area including coast live oak (*Quercus agrifolia*), tanoak (*Notholithocarpus densiflorus*), madrone (*Arbutus*

*menziesii*), bishop pine (*Pinus muricata*), and California bay laurel (*Umbellularia californica*). Large portions of the Project Study Area are dominated by non-native vines, including Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and Canary ivy (*Hedera canariensis*). Most of the herbaceous vegetation present at the site consists of annual grasses and forbs. However, all of these annual species were in a dormant and/or immature state due to the time of year and thus could not be identified to species.

### 3.2 Sensitive Vegetation Communities

Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. Sensitive vegetation alliances are ranked 1 through 5 based on NatureServe's (2010) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW, or USFWS must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G).

The Marin County Municipal Code, Chapter 22.27, requires that a Tree Removal Permit be obtained prior to the removal of protected trees (Marin County 2024). Protected trees are defined in the Marin County Municipal Code in Article VIII as specific species of native trees above a certain diameter at breast height.

Sensitive vegetation communities were determined to be absent from the Project Study Area.

### 3.3 Aquatic Resources

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities are considered sensitive biological resources that fall under the jurisdiction of several regulatory agencies including the USACE, RWQCB, CDFW, CCC, and the County of Marin.

Aquatic resources were determined to be absent from the Project Study Area.

### 3.4 Special-Status Plants

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory with California Rare Plant Ranks of 1 and 2 are also considered special-status plant species and must be considered under CEQA.

Based upon a review of the resources and databases given in Section 2.1, 86 special-status plant species have been documented within an 8-quadrangle (there are only 8 surrounding quadrangles due to the proximity to the ocean) search of the Project Study Area, of which 44 species have been documented within a five-mile radius (Appendix A, Figure 3). Based on the presence of biological communities described above and soils at the site, past disturbance during

development, and the species observed during protocol-level plant surveys, the Project Study Area has the potential to support none of these species.

The species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the Project Study Area, or for other rationale. Appendix E includes a table with evaluations of special-status species that were generated from the database lists and a discussion of why or why not the species was found to have potential to occur at the Project or in the vicinity and whether they would be directly or indirectly impacted by the proposed project. Habitat elements that were evaluated but found to be absent from the immediate area of the Project Study Area or surrounding habitats include the following:

- Hydrologic conditions (e.g., marshes, swamps, stream banks, seeps, meadows, tidal zones) necessary to support the special-status plants do not exist on the Project Study Area (e.g., Sonoma alopecurus [*Alopecurus aequalis var. sonomensis*], bristle-stalked sedge [*Carex leptalea*], Lyngbye's sedge [*Carex lyngbyei*], Humboldt Bay owl's-clover [*Castilleja ambigua var. humboldtiensis*], Point Reyes salty bird's-beak [*Chloropyron maritimum ssp. palustre*], Bolander's water-hemlock [*Cicuta maculata var. bolanderi*], water star-grass [*Heteranthera dubia*], Mason's lilaeopsis [*Lilaeopsis masonii*], coast lily [*Lilium maritimum*], California beaked-rush [*Rhynchospora californica*], Point Reyes checkerbloom [*Sidalcea calycosa ssp. rhizomata*], Pacific Grove clover [*Trifolium polyodon*]).
- Associated vegetation communities (e.g., coast bluff scrub, coastal prairie, coastal dunes, coniferous forest) necessary to support the special-status plants do not exist on the Project Study Area (e.g., Blasdale's bent grass [*Agrostis blasdalei*], coastal marsh milk-vetch [*Astragalus pycnostachyus var. pycnostachyus*], Point Reyes blennosperma [*Blennosperma nanum var. robustum*], Thurber's reed grass [*Calamagrostis crassiglumis*], coastal bluff morning-glory [*Calystegia purpurata ssp. saxicola*], woolly-headed spineflower [*Chorizanthe cuspidata var. villosa*], Franciscan thistle [*Cirsium andrewsii*], bluff wallflower [*Erysimum concinnum*], Marin checker lily [*Fritillaria lanceolata var. tristulis*], fragrant fritillary [*Fritillaria liliacea*], blue coast gilia [*Gilia capitata ssp. chamissonis*], dark-eyed gilia [*Gilia millefoliata*], Kellogg's horkelia [*Horkelia cuneata var. sericea*], Point Reyes horkelia [*Horkelia marinensis*], perennial goldfields [*Lasthenia californica ssp. macrantha*], beach layia [*Layia carnosa*], rose leptosiphon [*Leptosiphon rosaceus*], marsh microseris [*Microseris paludosa*], northern curly-leaved monardella [*Monardella sinuata ssp. nigrescens*], North Coast phacelia [*Phacelia insularis var. continentis*], Scouler's catchfly [*Silene scouleri* ssp*. scouleri*], two-fork clover [*Trifolium amoenum*], San Francisco owl's-clover [*Triphysaria floribunda*], coastal triquetrella [*Triquetrella californica*]).
- The project is outside the known elevation range for the species (e.g., island tube lichen [*Hypogymnia schizidiata*]).
- Other specific conditions, such as no species within a genus (e.g., *Arctostaphylos*, *Ceanothus*, *Dirca*) exist within the Project Study Area or that the species is known to be extinct, preclude the potential for such species to be present (e.g., Marin manzanita [*Arctostaphylos virgata*], Mt. Vision ceanothus [*Ceanothus gloriosus var. porrectus*],

western leatherwood [*Dirca occidentalis*], and Point Reyes paintbrush [*Castilleja leschkeana*] respectively)

- The species was not observed within the Project Study Area during protocol-level plant surveys performed during the blooming period for the species (e.g., congested-headed hayfield tarplant [*Hemizonia congesta ssp. congesta*], short-leaved evax [*Hesperevax brevifolia*])

**3.5 Special Status Wildlife**

In addition to wildlife listed as federal or state endangered and/or threatened, federal and state candidate species, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Although these species generally have no special legal status, they are given special consideration under CEQA. The federal Bald and Golden Eagle Protection Act also provides broad protections to both eagle species that are roughly analogous to those of listed species. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special-status and also considered under CEQA; bat roosts are protected under CDFW Fish and Game Code (CFGC). In addition to regulations for special-status species, most native birds in the United States (including non-status species) are protected by the federal Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

65 special-status wildlife species have been documented within an 8-quadrangle (there are only 8 surrounding quadrangles due to the proximity to the ocean) search of the Project Study Area, of which 35 species have been documented within a five-mile radius (Appendix A, Figure 4). Based on the presence of biological communities described above, the Project Study Area has the potential to support six of these species, which are described in Table 2 below.

The remaining species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the Project Study Area. Appendix E includes a table with evaluations of special-status species that were generated from the database lists and a discussion of why or why not the species was found to have potential to occur at the Project Study Area or in the vicinity and whether they would be directly or indirectly by the proposed project. Habitat elements that were evaluated but found to be absent from the immediate area of the Project Study Area or surrounding habitats subject to potential indirect impacts include the following:

- No freshwater stream or wetland habitat (e.g., for California freshwater shrimp, steelhead, coho salmon, southern coastal roach, California giant salamander, foothill yellow-legged frog, California red-legged frog, northwestern pond turtle, and tricolored blackbird).

- No suitable day roosting habitat (e.g., for pallid bat, Townsend's big-eared bat, hoary bat, and silver-haired bat).
- No open grassland habitat (e.g., for northern harrier, burrowing owl, and American badger).
- No suitable salt marsh habitat (e.g., for California black rail, yellow rail, and saltmarsh common yellowthroat).
- No brackish or estuarine waters (e.g., longfin smelt and tidewater goby).
- No coastal dune, prairie, or scrubland habitat (e.g., for Myrtle's silverspot butterfly).
- No sheltered groves of Eucalyptus or Monterrey Cypress (e.g., for overwintering monarch butterfly).
- Outside the current known range (e.g., for western bumblebee).
- No suitable coastal sandy beaches (e.g., for western snowy plover).
- No stands of old growth coast redwood (e.g., for marbled murrelet).
- No riparian vegetation (e.g., for yellow warbler).
- No wet, marshy coastal meadows (e.g., for Point Reyes jumping mouse).
- No densely vegetated north-facing slopes (e.g., for Point Reyes mountain beaver).

**Table 2. Special Status Wildlife with Potential to Occur in the Project Study Area**

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| **Birds** | | | |
| *Strix occidentalis caurina* Northern spotted owl | FT, ST | Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California). Preys on mammals. | **High Potential.** Four NSO activity centers are located within 1 mile of the Project Study Area, the closest of which is approximately 0.40 miles to the southwest. Due to the close proximity to several established activity centers, there is an exceedingly small chance of NSO nesting within the Project Study Area, though they may be found foraging in the vicinity. |
| *Pandion haliaetus* Osprey | WL | Summer resident. Occurs in direct association with large bodies of water: ocean shores, bays, lakes, and rivers. Preys on fishes. Prefers large trees and snags near water for nesting and roosting; also uses man-made structures (utility towers, channel markers, unused cranes). May travel several miles from nest sites to foraging areas. | **Moderate Potential.** There is one CNDDB occurrence of an osprey nest in 1979, approximately 0.69 miles northwest of the Project Study Area. There are suitable nesting trees in the vicinity of the Project Study Area, as well as close proximity to fish bearing water. |
| *Selasphorus sasin* Allen's hummingbird | BCC | Summer resident along the California coast, breeding in a variety of woodland and forest habitats, including parks and gardens with abundant nectar sources. Nest in shrubs and trees with dense vegetation. | **Moderate Potential.** Suitable nesting habitat for this species, as well as sufficient nectar sources, are located within or near the Project Study Area. |
| *Picoides nuttallii* Nuttal's woodpecker | BCC | Year-round resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities. | **Moderate Potential.** Suitable nesting trees are located within or near the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Baeolophus inornatus* Oak titmouse | BCC | Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities. | **Moderate Potential.** Suitable nesting trees are located within or near the Project Study Area. |
| *Chamaea fasciata* Wrentit | BCC | Year-round resident. Occurs in chaparral and coastal scrub along the coast, dense shrublands in arid regions. Nests in dense vegetation in a variety of shrub species. | **Low Potential.** Marginally suitable nesting shrubs are located within or near the Project Study Area. |

[1] FE/SE – Federal/State Endangered
FT/ST – Federal/State Threatened
SCE/T – State Candidate Endangered/Threatened
WL – CDFW Watch List
BCC – Bird of Conservation Concern

## 4.0 POTENTIAL IMPACTS

The assessment of impacts under CEQA is based on the change caused by the Project relative to the existing conditions at the proposed Project Study Area. In applying CEQA Appendix G, the terms "substantial" and "substantially" are used as the basis for significance determinations in many of the thresholds but are not defined qualitatively or quantitatively in CEQA or in technical literature. In some cases, the determination requires application of best professional judgment based on knowledge of site conditions as well as the ecology and physiology of biological resources present in a given area. The CEQA and State CEQA Guidelines defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Pursuant to Appendix G, Section IV of the State CEQA Guidelines, the proposed Project would have a significant impact on biological resources if it would:

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game [Wildlife] or U.S. Fish and Wildlife Service.

B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

C. Have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Potential impacts associated with implementation of the Project are addressed below. With implementation of the avoidance and minimization measures as well as the specific recommended mitigation measures that would be considered for incorporation in the IS/Mitigated Negative Declaration (MND), all Project-related impacts on biological resources can be reduced to a level considered less than significant.

Permits and Project Approvals

Special-status wildlife species have been documented and could potentially occur in the Project Study Area. Implementation of the control measures in addition to agency consultation and compliance with Project authorization issued by applicable regulatory agencies, would ensure reduction of impacts on special-status wildlife species, to a level considered less than significant pursuant to CEQA. Prior to Project commencement, applicable permits and Project approvals (listed under Section 1.2) will be secured.

### 4.1 Potentially Significant Impacts

Sensitive Biological Communities

There are no sensitive biological communities present in the Project Study Area, and as such, no impacts to sensitive biological communities will occur as a result of the Project.

Jurisdictional Aquatic Resources

There are no jurisdictional aquatic resources within the Project Study Area, and as such, no impacts to jurisdictional aquatic resources will occur as a result of the Project.

Special-Status Plant Species

No special-status plants have potential to occur within the Project Study Area, and as such, no impacts to special-status plants will occur as a result of the Project.

Special-Status Wildlife Species

**Northern spotted owl (*Strix occidentalis caurina*). Federal Threatened, State Threatened.** The northern spotted owl (NSO) is a subspecies of spotted owl (*Strix occidentalis*) found in western North America. It is a medium-sized (16-19 inches) dark brown owl with a wingspan of approximately forty inches; females are larger than males. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California). Spotted owls mate for life and typically do not migrate. Northern spotted owls are primarily nocturnal. Its diet consists mainly of woodrats (Neotoma sp.) and squirrels, as well as other small mammals, reptiles, birds and insects. It is intolerant of habitat disturbance and highly territorial. Each nesting pair requires a large territory for hunting and raising young.

Normally, in areas of high quality NSO habitat, activity centers are spaced approximately 1 mile from each other so that vocalizing owls can't hear one another. However, the unique topography of Inverness, with its many steep ridges acting as sound barriers, allows NSO to nest closer together, about 0.5 miles apart, without hearing each other. Due to this fact, there are many NSO activity centers located in close proximity to the Project Study Area. Because they are so close, owls from these activity centers may reasonably be found foraging within the Project Study Area. On the other hand, because the NSO in the area are already densely packed, there is almost no

chance for NSO to nest within the Project Study Area but may nest in proximity to proposed activities. As a result, no adverse effects from potential tree removal on NSO are anticipated. However, loud noises from construction have the potential to disturb NSO, potentially resulting in nest abandonment. Since there is at least one NSO activity center within 825 feet of the Project Study Area (which is the minimum no-disturbance acoustic buffer) as shown in Figure 4 (Appendix A), any loud construction noises occurring during the NSO breeding season would be considered an adverse effect to a federal and state listed species. In order to avoid potentially substantial impacts to NSO, all project activities exceedingly more than 20 decibels above ambient noise conditions, and/or greater than 90 decibels in total should occur outside the breeding season, which lasts from March 15 to August 31. Furthermore, work should be initiated outside the breeding season unless protocol-level surveys are performed to confirm there are no nests closer than 825 feet.

Migratory Birds and Raptors:

The Project Study Area provides nesting habitat for birds protected by the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code § 3513. Impacts to nesting birds resulting in nest abandonment or direct mortality to chicks or eggs is considered a significant impact under CEQA. All work should be initiated outside the nesting bird season which lasts from February 1 to August 31. Pre-construction surveys should be performed in accordance with the MBTA if there is a lapse in activity and/or new activities are initiated during the nesting period.

**Osprey (*Pandion haliaetus*), CDFW Watch List.** This remarkably effective fisher can be found year-round throughout much of northern California. Nesting habitat for this species varies greatly. Trees, snags, large rocks, bluffs, and artificial structures (such as towers supporting electrical lines or cell-phone relays and channel markers) are used to construct nests (Poole et al. 2002). An adequate supply of accessible fish within 10 miles of the nest is required. Shallow waters (0.5–2 m deep) provide the most accessible fish for this species and are, therefore, high quality habitat.

There are a variety of tall trees within and adjacent to the Project Study Area that provide suitable nesting habitat for Osprey. In addition, close proximity to Tomales Bay provides access to sufficient fish for osprey to forage. Therefore, there is a moderate potential for it to nest in the area. Tree removal could destroy active nests, and construction activities could disturb active nests, potentially causing nest abandonment, which would be considered a significant impact under CEQA.

**Allen's hummingbird (*Selasphorus sasin*). USFWS Bird of Conservation Concern.** Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California and the Channel Islands. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (Clark and Mitchell 2000). It feeds on nectar, as well as insects and spiders.

There are a variety of trees and shrubs within and adjacent to the Project Study Area that provide suitable nesting habitat for Allen's hummingbird, as well as sufficient nectar sources, therefore there is a moderate potential for it to nest in the area. Tree removal could destroy active nests, and construction activities could disturb active nests, potentially causing nest abandonment, which would be considered a significant impact under CEQA.

**Oak titmouse (*Baeolophus inornatus*), USFWS Bird of Conservation Concern.** This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley, and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat. Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines and/or junipers in some areas (Cicero 2000). Oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own (Cicero 2000). Seeds and arboreal invertebrates make up the birds' diet.

There are a variety of trees within and adjacent to the Project Study Area that provide suitable nesting habitat for oak titmouse, therefore there is a moderate potential for it to nest in the area. Tree removal could destroy active nests, and construction activities could disturb active nests, potentially causing nest abandonment, which would be considered a significant impact under CEQA.

**Nuttall's woodpecker (*Picoides nuttallii*), USFWS Bird of Conservation Concern.** Nuttall's Woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat is oak or mixed woodland, and riparian areas (Lowther 2000). Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

There are a variety of trees within and adjacent to the Project Study Area that provide suitable nesting habitat for Nuttall's woodpecker, therefore there is a moderate potential for it to nest in the area. Tree removal could destroy active nests, and construction activities could disturb active nests, potentially causing nest abandonment, which would be considered a significant impact under CEQA.

**Wrentit (*Chamaea fasciata*), USFWS Bird of Conservation Concern.** The wrentit lives in coastal scrub and chaparral habitats along the west coast, including suburban parks with shrub habitat. They primarily occur in shrub thickets along creeks, and in dense shrublands with coyote bush, manzanita, poison oak, and blackberry. This species nests and forages in dense low growth, usually between one and four feet above the ground. This species is considered sedentary and seldom leaves the breeding areas to migrate elsewhere.

There are a variety of shrubs within and adjacent to the Project Study Area that provide suitable nesting habitat for wrentit, therefore there is a moderate potential for it to nest in the area. Tree removal could destroy active nests, and construction activities could disturb active nests,

potentially causing nest abandonment, which would be considered a significant impact under CEQA.

Wildlife Corridors

The Project Study Area is in an area traversed by terrestrial mammals that reside mostly in residential areas such as Columbian black-tailed deer, racoon, gray fox, and striped skunk. The Project will not impede the movement of wildlife.

Marin County Tree Ordinance

Because the Project will require the removal of two Heritage Trees, a 24-inch coast live oak and a 36-inch coast live oak, a tree removal permit is required per Marin County Ordinance § 22.27.030 *Prohibition on Removal of Protected Trees* (Marin County 2024).

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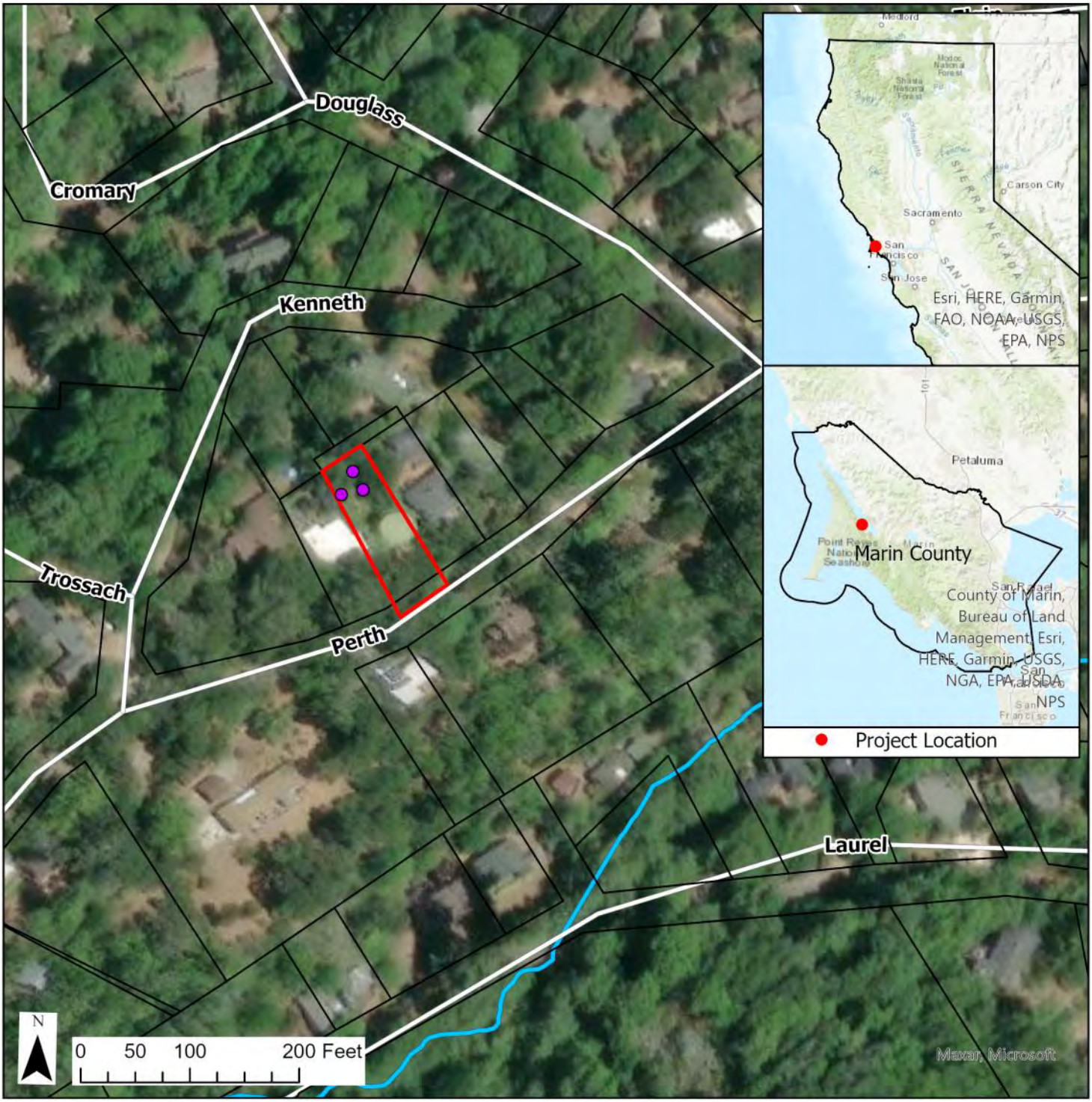
APPENDIX A

PROJECT FIGURES: SITE LOCATION MAP, AND CNDDB DATABASE RESULTS (3)

**Figure 1: Project Location**

Perth Way, Inverness, CA (112-262-06)




Date: 2-23-2024
Data: Sol Ecology Inc., Marin Co.

Base: ESRI
GIS: JC2403

SOL ECOLOGY
solecology.com

**Figure 2: Special Status Plant Species within 5 Miles of the Project Site**

Perth Way, Inverness, CA (112-262-06)

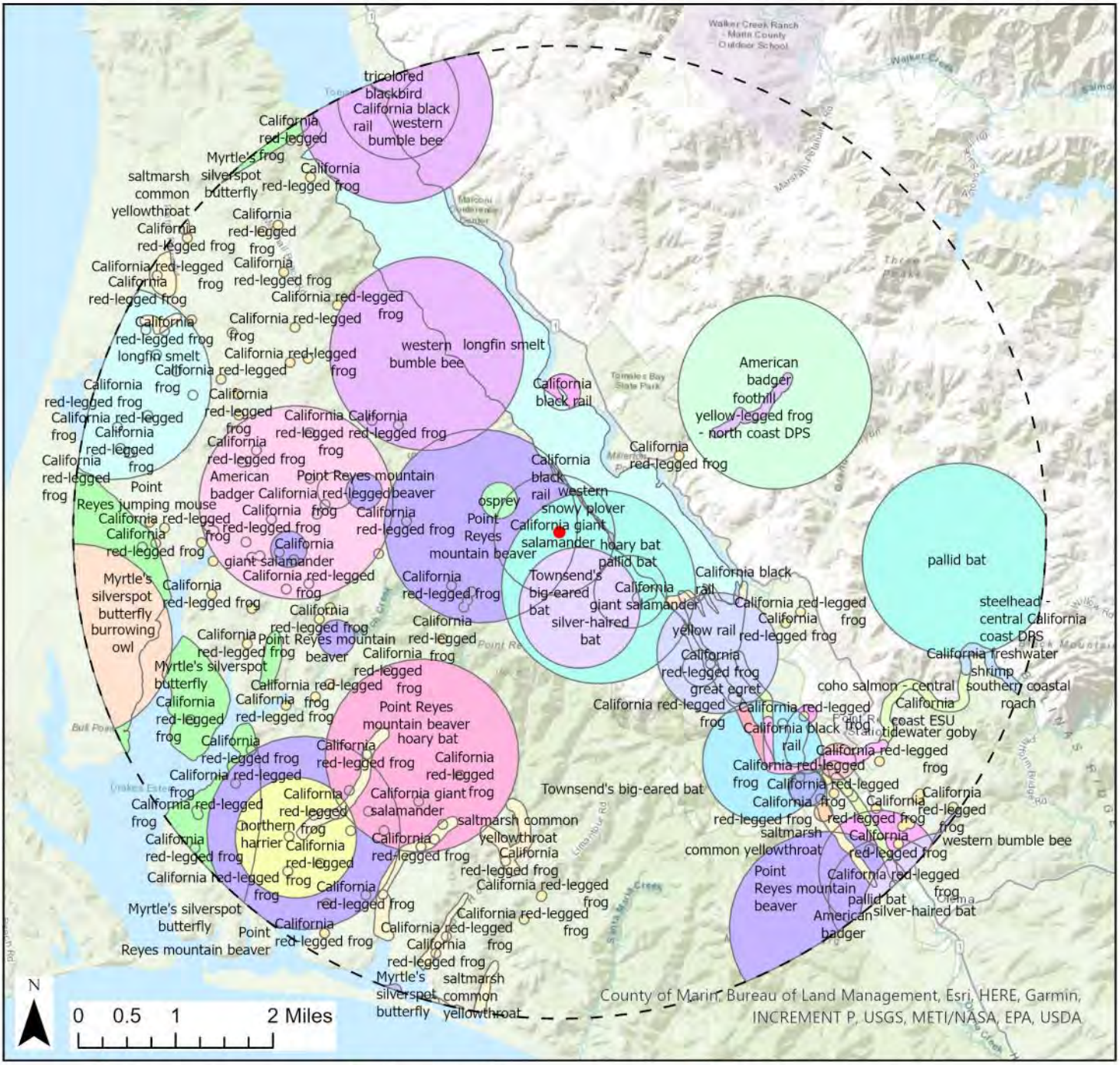

- Project Location
- 5 Miles
- Blasdale's bent grass (8)
- Bolander's water-hemlock (5)
- California beaked-rush (1)
- Franciscan thistle (4)
- Humboldt Bay owl's-clover (3)
- Kellogg's horkelia (1)
- Lyngbye's sedge (3)
- Marin checker lily (12)
- Marin knotweed (15)
- Marin manzanita (9)
- Mason's lilaeopsis (1)
- Mt. Vision ceanothus (11)
- North Coast phacelia (3)
- Pacific Grove clover (1)
- Point Reyes blennosperma (4)
- Point Reyes checkerbloom (13)
- Point Reyes horkelia (7)
- Point Reyes paintbrush (1)
- Point Reyes salty bird's-beak (20)
- San Francisco owl's-clover (13)
- Scouler's catchfly (1)
- Sonoma alopecurus (2)
- Sonoma spineflower (0)
- Thurber's reed grass (3)
- beach layia (1)
- blue coast gilia (3)
- bluff wallflower (3)
- bristle-stalked sedge (1)
- coast lily (2)
- coastal bluff morning-glory (1)
- coastal marsh milk-vetch (5)
- coastal triquetrella (1)
- congested-headed hayfield tarplant (1)
- dark-eyed gilia (5)
- fragrant fritillary (6)
- island tube lichen (1)
- marsh microseris (4)
- northern curly-leaved monardella (1)
- perennial goldfields (3)
- purple-stemmed checkerbloom (1)
- rose leptosiphon (4)
- short-leaved evax (4)
- swamp harebell (21)
- two-fork clover (1)
- water star-grass (1)
- western leatherwood (1)
- woolly-headed spineflower (4)

Date: 2-23-2024
Data: Sol Ecology Inc., Marin Co., CDFW
Base: ESRI
GIS: JC2403

SOL ECOLOGY
solecology.com

**Figure 3: Special Status Wildlife Species within 5 Miles of the Project Site**

Perth Way, Inverness, CA (112-262-06)




- Project Location
- 5 Miles
- American badger (3)
- California black rail (7)
- California freshwater shrimp (2)
- California giant salamander (6)
- California red-legged frog (80)
- Myrtle's silverspot butterfly (3)
- Point Reyes jumping mouse (2)
- Point Reyes mountain beaver (7)
- Townsend's big-eared bat (2)
- burrowing owl (1)
- coho salmon - central California coast ESU (1)
- foothill yellow-legged frog - north coast DPS (1)
- great egret (1)
- hoary bat (2)
- longfin smelt (2)
- northern harrier (1)
- osprey (1)
- pallid bat (3)
- saltmarsh common yellowthroat (10)
- silver-haired bat (2)
- southern coastal roach (2)
- steelhead - central California coast DPS (1)
- tidewater goby (1)
- tricolored blackbird (1)
- western bumble bee (3)
- western pond turtle (1)
- western snowy plover (2)
- yellow rail (1)
- yellow warbler (1)

Date: 2-23-2024
Data: Sol Ecology Inc., Marin Co., CDFW
Base: ESRI
GIS: JC2403

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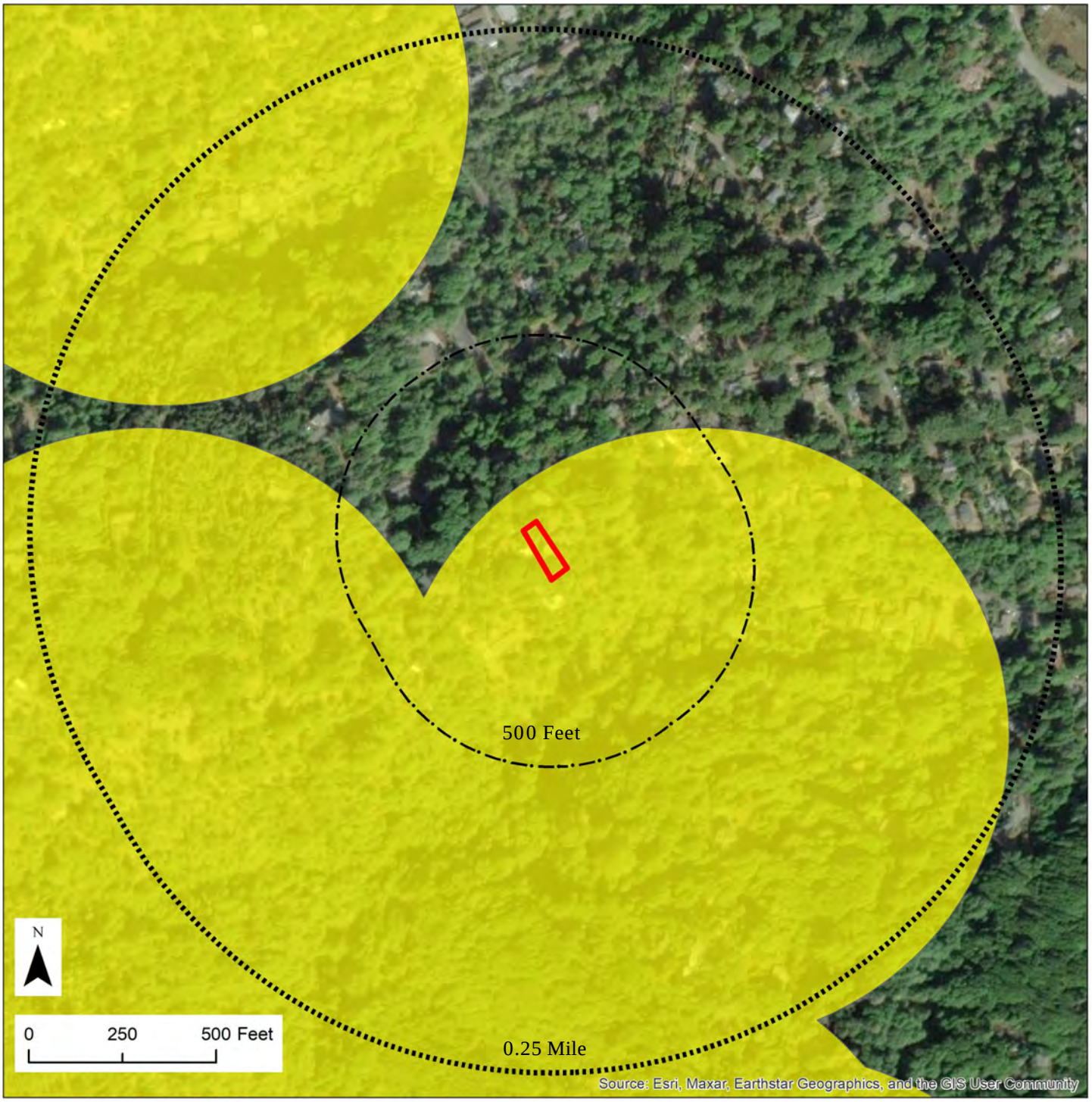
**Figure 4: Northern Spotted Owl Occurrences**
Colby Tank Site, Inverness, Marin County, California




Colby Tank Site
500-Ft Buffer
0.25-Mile Buffer
SPOW Observation 825-Ft No Disturbance Noise Buffer

Date: 6-18-2024
Data: Sol Ecology Inc., Marin Co., CDFW

Base: ESRI
GIS: LM2403

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APPENDIX B

SITE PHOTOGRAPHS

**Photo 1.** Location of the three water tanks to be replaced.

**Photo 2.** Road-facing gate to the Project Site. Tank in background to remain.

**Photo 3.** Large trees overhanging the water tanks to be replaced.

**Photo 4.** Vegetated area of Project Site near to the road.

APPENDIX C

OBSERVED SPECIES TABLES

Observed Plant Species
(*) = Non-native/invasive

| | |
|---|---|
| **Alliaceae** | |
| **Allium triquetrum* | Three-cornered garlic |
| **Apocynaceae** | |
| **Vinca major* | Periwinkle |
| **Araliaceae** | |
| **Hedera helix* | English ivy |
| **Asteraceae** | |
| **Erigeron karvinskianus* | Mexican fleabane |
| **Hypochaeris radicata* | Hairy cats ear |
| **Betulaceae** | |
| *Corylus cornuta* ssp. *californica* | California beaked hazelnut |
| **Boraginaceae** | |
| **Myosotis latifolia* | Wide leaved forget-me-not |
| **Caprifoliaceae** | |
| *Lonicera hispidula* | Pink honeysuckle |
| **Cucurbitaceae** | |
| *Marah oregana* | Coast man-root |
| **Cyperaceae** | |
| *Cyperus eragrostis* | Tall flatsedge |
| **Dryopteridaceae** | |
| *Dryopteris arguta* | Coastal woodfern |
| *Polystichum munitum* | Western swordfern |
| **Ericaceae** | |
| *Arbutus menziesii* | Pacific madrone |
| **Fabaceae** | |
| **Genista monspessulana* | French broom |
| *Lathyrus vestitus* | Common pacific pea |
| **Fagaceae** | |
| *Quercus agrifolia* | Coast live oak |
| *Notholithocarpus densiflorus* | Tan oak |
| **Juncaceae** | |
| *Juncus* sp. | Rush |
| **Lamiaceae** | |
| *Stachys rigida* | Rough hedge-nettle |

| | |
|---|---|
| **Pinaceae** | |
| *Pinus muricata* | Bishop pine |
| **Plantaginaceae** | |
| **Plantago lanceolata* | Ribwort |
| **Poaceae** | |
| **Dactylis glomerata* | Orchard grass |
| **Ehrharta erecta* | Panic veldtgrass |
| **Poa annua* | Annual meadowgrass |
| **Polygonaceae** | |
| **Rumex crispus* | Curled dock |
| **Polypodiaceae** | |
| *Polypodium californicum* | California polypody |
| **Rosaceae** | |
| **Prunus* sp. (ornamental) | Cherry |
| **Rubus armeniacus* | Himalayan blackberry |
| *Rubus parviflorus* | Thimbleberry |
| *Rubus ursinus* | California blackberry |
| **Rubiaceae** | |
| *Galium trifidum* | Three-petal bedstraw |
| **Scrophulariaceae** | |
| *Scrophularia californica* | California bee plant |

Observed Wildlife Species

| | |
|---|---|
| Birds | |
| *Calypte anna* | Anna's hummingbird |
| *Cathartes aura* | Turkey vulture |
| *Buteo jamaicensis* | Red-tailed hawk |
| *Buteo lineatus* | Red-shouldered hawk |
| *Melanerpes formicivorus* | Acorn woodpecker |
| *Corvus corax* | Common raven |
| *Cyanocitta stelleri* | Stellar's jay |
| *Aphelocoma californica* | California scrub jay |
| *Turdus migratorius* | American robin |
| *Poecile rufescens* | Chestnut-backed chickadee |
| *Passer domesticus* | House Sparrow |
| *Pipilo maculatus* | Spotted towhee |
| *Spinus pinus* | Pine Siskin |
| Mammals | |
| *Sciurus sp.* | Gray squirrel |

APPENDIX D

CNDDB RESULTS AND USFWS IPAC WITHIN THE 8 QUADRANT SEARCH OF THE PROJECT STUDY AREA

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Inverness (3812217) OR Point Reyes NE (3812227) OR Petaluma (3812226) OR San Geronimo (3812216) OR Bolinas (3712286) OR Double Point (3712287) OR Drakes Bay (3812218) OR Tomales (3812228))<br /> AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Abronia umbellata var. breviflora***<br>pink sand-verbena | G4G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 5<br>80 | 61<br>S:14 | 0 | 5 | 3 | 1 | 0 | 5 | 11 | 3 | 14 | 0 | 0 |
| ***Agrostis blasdalei***<br>Blasdale's bent grass | G2G3<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_UCSC-UC Santa Cruz | 20<br>1,200 | 62<br>S:19 | 1 | 9 | 6 | 0 | 0 | 3 | 12 | 7 | 19 | 0 | 0 |
| ***Allium peninsulare var. franciscanum***<br>Franciscan onion | G4G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | | 25<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Alopecurus aequalis var. sonomensis***<br>Sonoma alopecurus | G5T1<br>S1 | Endangered<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 10<br>300 | 21<br>S:8 | 0 | 3 | 2 | 0 | 3 | 0 | 3 | 5 | 5 | 1 | 2 |
| ***Amorpha californica var. napensis***<br>Napa false indigo | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 180<br>1,500 | 123<br>S:10 | 2 | 4 | 2 | 0 | 0 | 2 | 0 | 10 | 10 | 0 | 0 |
| ***Amsinckia lunaris***<br>bent-flowered fiddleneck | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_UCBG-UC Botanical Garden at Berkeley<br>SB_UCSC-UC Santa Cruz | 10<br>1,967 | 93<br>S:7 | 0 | 0 | 2 | 0 | 0 | 5 | 3 | 4 | 7 | 0 | 0 |
| ***Arctostaphylos montana ssp. montana***<br>Mt. Tamalpais manzanita | G3T3<br>S3 | None<br>None | Rare Plant Rank - 1B.3<br>SB_UCBG-UC Botanical Garden at Berkeley | 1,000<br>1,200 | 15<br>S:8 | 0 | 1 | 0 | 0 | 0 | 7 | 6 | 2 | 8 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Arctostaphylos virgata***<br>Marin manzanita | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_USDA-US Dept of Agriculture | 5<br>1,532 | 32<br>S:24 | 1 | 4 | 3 | 1 | 0 | 15 | 19 | 5 | 24 | 0 | 0 |
| ***Astragalus pycnostachyus var. pycnostachyus***<br>coastal marsh milk-vetch | G2T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_SBBG-Santa Barbara Botanic Garden<br>SB_UCBG-UC Botanical Garden at Berkeley | 5<br>10 | 24<br>S:11 | 0 | 5 | 2 | 1 | 1 | 2 | 8 | 3 | 10 | 1 | 0 |
| ***Astragalus tener var. tener***<br>alkali milk-vetch | G2T1<br>S1 | None<br>None | Rare Plant Rank - 1B.2<br>SB_UCSC-UC Santa Cruz | 30<br>30 | 65<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Blennosperma nanum var. robustum***<br>Point Reyes blennosperma | G4T2<br>S2 | None<br>Rare | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 30<br>400 | 13<br>S:12 | 1 | 7 | 2 | 0 | 0 | 2 | 6 | 6 | 12 | 0 | 0 |
| ***Calamagrostis crassiglumis***<br>Thurber's reed grass | G3Q<br>S2 | None<br>None | Rare Plant Rank - 2B.1 | 25<br>100 | 15<br>S:6 | 1 | 2 | 2 | 0 | 0 | 1 | 6 | 0 | 6 | 0 | 0 |
| ***Calystegia purpurata ssp. saxicola***<br>coastal bluff morning-glory | G4T2T3<br>S2S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_UCSC-UC Santa Cruz | 50<br>500 | 42<br>S:8 | 0 | 3 | 1 | 0 | 0 | 4 | 5 | 3 | 8 | 0 | 0 |
| ***Cardamine angulata***<br>seaside bittercress | G4G5<br>S3 | None<br>None | Rare Plant Rank - 2B.1 | | 38<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Carex leptalea***<br>bristle-stalked sedge | G5<br>S1 | None<br>None | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern | 400<br>400 | 8<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Carex lyngbyei***<br>Lyngbye's sedge | G5<br>S3 | None<br>None | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern | 10<br>100 | 37<br>S:4 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 0 | 0 |

# Summary Table Report

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## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Castilleja affinis var. neglecta***<br>Tiburon paintbrush | G4G5T1T2<br>S1S2 | Endangered<br>Threatened | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCBG-UC Botanical Garden at Berkeley | 900<br>900 | 7<br>S:1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Castilleja ambigua var. humboldtiensis***<br>Humboldt Bay owl's-clover | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_UCBG-UC Botanical Garden at Berkeley | 5<br>6 | 31<br>S:4 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 4 | 0 | 0 |
| ***Castilleja leschkeana***<br>Point Reyes paintbrush | GX<br>SX | None<br>None | Rare Plant Rank - 1A | 80<br>80 | 2<br>S:2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 |
| ***Ceanothus decornutus***<br>Nicasio ceanothus | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 800<br>950 | 2<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 0 |
| ***Ceanothus gloriosus var. porrectus***<br>Mt. Vision ceanothus | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.3<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 40<br>1,100 | 18<br>S:18 | 1 | 10 | 2 | 0 | 0 | 5 | 10 | 8 | 18 | 0 | 0 |
| ***Ceanothus masonii***<br>Mason's ceanothus | G1<br>S1 | None<br>Rare | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_USDA-US Dept of Agriculture | 600<br>1,500 | 8<br>S:8 | 1 | 2 | 1 | 0 | 0 | 4 | 5 | 3 | 8 | 0 | 0 |
| ***Chloropyron maritimum ssp. palustre***<br>Point Reyes salty bird's-beak | G4?T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 0<br>40 | 80<br>S:36 | 4 | 19 | 3 | 2 | 1 | 7 | 14 | 22 | 35 | 1 | 0 |
| ***Chorizanthe cuspidata var. cuspidata***<br>San Francisco Bay spineflower | G2T1<br>S1 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 50<br>50 | 17<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |

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## California Department of Fish and Wildlife

## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Chorizanthe cuspidata var. villosa***<br>woolly-headed spineflower | G2T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2 | 25<br>200 | 17<br>S:12 | 0 | 6 | 0 | 0 | 0 | 6 | 7 | 5 | 12 | 0 | 0 |
| ***Chorizanthe valida***<br>Sonoma spineflower | G1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 30<br>60 | 6<br>S:4 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 3 | 3 | 1 | 0 |
| ***Cicuta maculata var. bolanderi***<br>Bolander's water-hemlock | G5T4T5<br>S2? | None<br>None | Rare Plant Rank - 2B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 0<br>40 | 17<br>S:6 | 0 | 2 | 0 | 0 | 0 | 4 | 2 | 4 | 6 | 0 | 0 |
| ***Cirsium andrewsii***<br>Franciscan thistle | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 5<br>480 | 31<br>S:13 | 2 | 6 | 0 | 0 | 0 | 5 | 10 | 3 | 13 | 0 | 0 |
| ***Cirsium hydrophilum var. vaseyi***<br>Mt. Tamalpais thistle | G2T1<br>S1 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 600<br>1,300 | 14<br>S:7 | 2 | 2 | 0 | 0 | 0 | 3 | 5 | 2 | 7 | 0 | 0 |
| ***Clarkia concinna ssp. raichei***<br>Raiche's red ribbons | G5?T1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCBG-UC Botanical Garden at Berkeley | 50<br>50 | 1<br>S:1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| ***Collinsia corymbosa***<br>round-headed collinsia | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | | 13<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Delphinium bakeri***<br>Baker's larkspur | G1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_UCBG-UC Botanical Garden at Berkeley | 305<br>705 | 6<br>S:5 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 4 | 5 | 0 | 0 |
| ***Delphinium luteum***<br>golden larkspur | G1<br>S1 | Endangered<br>Rare | Rare Plant Rank - 1B.1<br>SB_UCBG-UC Botanical Garden at Berkeley | 40<br>150 | 11<br>S:3 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 0 |

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## California Department of Fish and Wildlife

## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Dirca occidentalis***<br>western leatherwood | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 140<br>600 | 90<br>S:7 | 0 | 2 | 1 | 0 | 0 | 4 | 2 | 5 | 7 | 0 | 0 |
| ***Eastwoodiella californica***<br>swamp harebell | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 5<br>800 | 155<br>S:25 | 0 | 11 | 0 | 2 | 1 | 11 | 15 | 10 | 24 | 1 | 0 |
| ***Entosthodon kochii***<br>Koch's cord moss | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.3<br>BLM_S-Sensitive | | 4<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Erigeron supplex***<br>supple daisy | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_UCBG-UC Botanical Garden at Berkeley | | 21<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Eriogonum luteolum var. caninum***<br>Tiburon buckwheat | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 550<br>1,025 | 26<br>S:6 | 2 | 0 | 0 | 0 | 0 | 4 | 4 | 2 | 6 | 0 | 0 |
| ***Erysimum concinnum***<br>bluff wallflower | G3<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive | 10<br>200 | 30<br>S:10 | 0 | 0 | 0 | 0 | 0 | 10 | 8 | 2 | 10 | 0 | 0 |
| ***Fritillaria lanceolata var. tristulis***<br>Marin checker lily | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>SB_UCSC-UC Santa Cruz | 20<br>1,000 | 32<br>S:31 | 1 | 11 | 11 | 0 | 0 | 8 | 22 | 9 | 31 | 0 | 0 |
| ***Fritillaria liliacea***<br>fragrant fritillary | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | 30<br>900 | 82<br>S:15 | 1 | 4 | 6 | 0 | 0 | 4 | 10 | 5 | 15 | 0 | 0 |
| ***Gilia capitata ssp. chamissonis***<br>blue coast gilia | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>SB_UCBG-UC Botanical Garden at Berkeley | 20<br>120 | 37<br>S:19 | 0 | 5 | 6 | 0 | 2 | 6 | 12 | 7 | 17 | 2 | 0 |
| ***Gilia capitata ssp. tomentosa***<br>woolly-headed gilia | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 45<br>955 | 18<br>S:7 | 1 | 0 | 0 | 0 | 1 | 5 | 3 | 4 | 6 | 1 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Gilia millefoliata***<br>dark-eyed gilia | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 20<br>200 | 54<br>S:13 | 0 | 5 | 4 | 0 | 0 | 4 | 8 | 5 | 13 | 0 | 0 |
| ***Hemizonia congesta ssp. congesta***<br>congested-headed hayfield tarplant | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_UCBG-UC Botanical Garden at Berkeley | 20<br>1,400 | 52<br>S:10 | 1 | 0 | 3 | 0 | 0 | 6 | 7 | 3 | 10 | 0 | 0 |
| ***Hesperevax sparsiflora var. brevifolia***<br>short-leaved evax | G4T3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 50<br>300 | 72<br>S:10 | 0 | 6 | 1 | 0 | 0 | 3 | 7 | 3 | 10 | 0 | 0 |
| ***Hesperolinon congestum***<br>Marin western flax | G1<br>S1 | Threatened<br>Threatened | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCBG-UC Botanical Garden at Berkeley | 550<br>1,315 | 27<br>S:6 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 5 | 6 | 0 | 0 |
| ***Heteranthera dubia***<br>water star-grass | G5<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern | 80<br>80 | 9<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Horkelia cuneata var. sericea***<br>Kellogg's horkelia | G4T1?<br>S1? | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCSC-UC Santa Cruz<br>USFS_S-Sensitive | 50<br>50 | 58<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Horkelia marinensis***<br>Point Reyes horkelia | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCSC-UC Santa Cruz | 25<br>330 | 36<br>S:10 | 0 | 5 | 2 | 0 | 0 | 3 | 6 | 4 | 10 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Horkelia tenuiloba***<br>thin-lobed horkelia | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 1,300<br>1,300 | 27<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Hypogymnia schizidiata***<br>island tube lichen | G2G3<br>S2 | None<br>None | Rare Plant Rank - 1B.3 | | 10<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| ***Lasthenia californica ssp. bakeri***<br>Baker's goldfields | G3T1<br>S1 | None<br>None | Rare Plant Rank - 1B.2 | 400<br>400 | 19<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Lasthenia californica ssp. macrantha***<br>perennial goldfields | G3T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 40<br>600 | 59<br>S:17 | 0 | 9 | 1 | 0 | 0 | 7 | 8 | 9 | 17 | 0 | 0 |
| ***Layia carnosa***<br>beach layia | G2<br>S2 | Threatened<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_SBBG-Santa Barbara Botanic Garden | 30<br>100 | 25<br>S:6 | 0 | 4 | 1 | 0 | 1 | 0 | 5 | 1 | 5 | 1 | 0 |
| ***Leptosiphon rosaceus***<br>rose leptosiphon | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 35<br>450 | 31<br>S:24 | 0 | 10 | 7 | 2 | 1 | 4 | 15 | 9 | 23 | 1 | 0 |
| ***Lessingia micradenia var. micradenia***<br>Tamalpais lessingia | G2T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_USDA-US Dept of Agriculture | 1,000<br>1,000 | 9<br>S:5 | 0 | 1 | 0 | 0 | 0 | 4 | 3 | 2 | 5 | 0 | 0 |
| ***Lilaeopsis masonii***<br>Mason's lilaeopsis | G2<br>S2 | None<br>Rare | Rare Plant Rank - 1B.1 | 5<br>5 | 198<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Lilium maritimum***<br>coast lily | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>BLM_S-Sensitive<br>SB_BerrySB-Berry Seed Bank<br>SB_UCBG-UC Botanical Garden at Berkeley | 20<br>400 | 84<br>S:3 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 1 | 3 | 0 | 0 |
| ***Lilium pardalinum ssp. pitkinense***<br>Pitkin Marsh lily | G5T1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_BerrySB-Berry Seed Bank<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_USDA-US Dept of Agriculture | | 4<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Limnanthes douglasii ssp. sulphurea***<br>Point Reyes meadowfoam | G4T1<br>S1 | None<br>Endangered | Rare Plant Rank - 1B.2<br>SB_UCBG-UC Botanical Garden at Berkeley | 30<br>400 | 12<br>S:11 | 0 | 8 | 2 | 1 | 0 | 0 | 5 | 6 | 11 | 0 | 0 |
| ***Lupinus tidestromii***<br>Tidestrom's lupine | G1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 30<br>80 | 21<br>S:12 | 0 | 2 | 7 | 2 | 1 | 0 | 5 | 7 | 11 | 1 | 0 |
| ***Microseris paludosa***<br>marsh microseris | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_SBBG-Santa Barbara Botanic Garden<br>SB_UCSC-UC Santa Cruz | 20<br>320 | 38<br>S:11 | 0 | 6 | 2 | 0 | 0 | 3 | 7 | 4 | 11 | 0 | 0 |
| ***Mielichhoferia elongata***<br>elongate copper moss | G5<br>S3S4 | None<br>None | Rare Plant Rank - 4.3<br>USFS_S-Sensitive | 100<br>100 | 20<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Monardella sinuata ssp. nigrescens***<br>northern curly-leaved monardella | G3T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_SBBG-Santa Barbara Botanic Garden | 40<br>200 | 25<br>S:12 | 0 | 7 | 5 | 0 | 0 | 0 | 3 | 9 | 12 | 0 | 0 |
| ***Navarretia rosulata***<br>Marin County navarretia | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 900<br>1,450 | 15<br>S:7 | 1 | 2 | 0 | 0 | 0 | 4 | 3 | 4 | 7 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Phacelia insularis var. continentis***<br>North Coast phacelia | G2T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_UCBG-UC Botanical Garden at Berkeley | 30<br>500 | 15<br>S:6 | 0 | 1 | 3 | 1 | 0 | 1 | 1 | 5 | 6 | 0 | 0 |
| ***Piperia elegans ssp. decurtata***<br>Point Reyes rein orchid | G4T1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 50<br>500 | 3<br>S:3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 |
| ***Plagiobothrys mollis var. vestitus***<br>Petaluma popcornflower | G4?TX<br>SX | None<br>None | Rare Plant Rank - 1A | 20<br>20 | 1<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Pleuropogon hooverianus***<br>North Coast semaphore grass | G2<br>S2 | None<br>Threatened | Rare Plant Rank - 1B.1<br>SB_BerrySB-Berry Seed Bank<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 350<br>500 | 34<br>S:4 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 1 | 0 |
| ***Polygonum marinense***<br>Marin knotweed | G2Q<br>S2 | None<br>None | Rare Plant Rank - 3.1 | 5<br>5 | 32<br>S:21 | 0 | 11 | 7 | 0 | 0 | 3 | 20 | 1 | 21 | 0 | 0 |
| ***Quercus parvula var. tamalpaisensis***<br>Tamalpais oak | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.3 | 532<br>1,635 | 19<br>S:5 | 0 | 1 | 0 | 0 | 0 | 4 | 2 | 3 | 5 | 0 | 0 |
| ***Rhynchospora californica***<br>California beaked-rush | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_UCSC-UC Santa Cruz | 400<br>400 | 9<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Sagittaria sanfordii***<br>Sanford's arrowhead | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive | 170<br>170 | 143<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| ***Sidalcea calycosa ssp. rhizomata***<br>Point Reyes checkerbloom | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2 | 20<br>300 | 34<br>S:21 | 0 | 15 | 3 | 0 | 0 | 3 | 12 | 9 | 21 | 0 | 0 |
| ***Sidalcea hickmanii ssp. viridis***<br>Marin checkerbloom | G3TH<br>SH | None<br>None | Rare Plant Rank - 1B.1 | 1,390<br>1,390 | 1<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Sidalcea malviflora ssp. purpurea***<br>purple-stemmed checkerbloom | G5T1<br>S1 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive | 50<br>50 | 19<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Silene scouleri ssp. scouleri***<br>Scouler's catchfly | G5T4T5<br>S2S3 | None<br>None | Rare Plant Rank - 2B.2 | 400<br>400 | 23<br>S:3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 0 | 0 |

# Summary Table Report

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Stebbinsoseris decipiens***<br>Santa Cruz microseris | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCSC-UC Santa Cruz | | 19<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Streptanthus anomalus***<br>Mount Burdell jewelflower | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 535<br>535 | 2<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| ***Streptanthus batrachopus***<br>Tamalpais jewelflower | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.3<br>SB_UCSC-UC Santa Cruz | 1,100<br>1,480 | 8<br>S:3 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 |
| ***Streptanthus glandulosus ssp. pulchellus***<br>Mt. Tamalpais bristly jewelflower | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 500<br>1,300 | 24<br>S:16 | 1 | 4 | 0 | 0 | 0 | 11 | 14 | 2 | 16 | 0 | 0 |
| ***Thamnolia vermicularis***<br>whiteworm lichen | G5<br>S1 | None<br>None | Rare Plant Rank - 2B.1 | 350<br>350 | 1<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| ***Trifolium amoenum***<br>two-fork clover | G1<br>S1 | Endangered<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_UCBG-UC Botanical Garden at Berkeley<br>SB_USDA-US Dept of Agriculture | 200<br>300 | 26<br>S:5 | 0 | 0 | 0 | 0 | 3 | 2 | 4 | 1 | 2 | 3 | 0 |
| ***Trifolium polyodon***<br>Pacific Grove clover | G1<br>S1 | None<br>Rare | Rare Plant Rank - 1B.1<br>BLM_S-Sensitive<br>SB_USDA-US Dept of Agriculture | 20<br>90 | 21<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 0 | 0 |
| ***Triphysaria floribunda***<br>San Francisco owl's-clover | G2?<br>S2? | None<br>None | Rare Plant Rank - 1B.2 | 10<br>480 | 50<br>S:32 | 2 | 16 | 4 | 4 | 0 | 6 | 24 | 8 | 32 | 0 | 0 |
| ***Triquetrella californica***<br>coastal triquetrella | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>USFS_S-Sensitive | | 13<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Inverness (3812217) OR Point Reyes NE (3812227) OR Petaluma (3812226) OR San Geronimo (3812216) OR Bolinas (3712286) OR Double Point (3712287) OR Drakes Bay (3812218) OR Tomales (3812228))<br /> AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects)

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Adela oplerella***<br>Opler's longhorn moth | G2<br>S2 | None<br>None | | 500<br>500 | 14<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Agelaius tricolor***<br>tricolored blackbird | G1G2<br>S2 | None<br>Threatened | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_EN-Endangered<br>USFWS_BCC-Birds of Conservation Concern | 11<br>403 | 960<br>S:5 | 0 | 1 | 0 | 0 | 0 | 4 | 5 | 0 | 5 | 0 | 0 |
| ***Ambystoma californiense pop. 3***<br>California tiger salamander - Sonoma County DPS | G2G3T2<br>S2 | Endangered<br>Threatened | CDFW_WL-Watch List<br>IUCN_VU-Vulnerable | 85<br>85 | 85<br>S:2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| ***Antrozous pallidus***<br>pallid bat | G4<br>S3 | None<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive | 40<br>730 | 420<br>S:8 | 1 | 1 | 0 | 1 | 0 | 5 | 8 | 0 | 8 | 0 | 0 |
| ***Aplodontia rufa phaea***<br>Point Reyes mountain beaver | G5T2<br>S2 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern | 40<br>400 | 9<br>S:9 | 0 | 0 | 0 | 0 | 4 | 5 | 9 | 0 | 5 | 4 | 0 |
| ***Ardea alba***<br>great egret | G5<br>S4 | None<br>None | CDF_S-Sensitive<br>IUCN_LC-Least Concern | 20<br>100 | 43<br>S:4 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 4 | 0 | 0 |
| ***Ardea herodias***<br>great blue heron | G5<br>S4 | None<br>None | CDF_S-Sensitive<br>IUCN_LC-Least Concern | 20<br>250 | 156<br>S:9 | 0 | 0 | 0 | 0 | 1 | 8 | 9 | 0 | 8 | 1 | 0 |
| ***Athene cunicularia***<br>burrowing owl | G4<br>S2 | None<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFWS_BCC-Birds of Conservation Concern | 80<br>1,720 | 2011<br>S:3 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 0 |

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| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Bombus caliginosus***<br>obscure bumble bee | G2G3<br>S1S2 | None<br>None | IUCN_VU-Vulnerable | 0<br>1,000 | 181<br>S:16 | 0 | 0 | 0 | 0 | 0 | 16 | 13 | 3 | 16 | 0 | 0 |
| ***Bombus occidentalis***<br>western bumble bee | G3<br>S1 | None<br>Candidate Endangered | IUCN_VU-Vulnerable<br>USFS_S-Sensitive | 0<br>400 | 306<br>S:10 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 10 | 0 | 0 |
| ***Bombus pensylvanicus***<br>American bumble bee | G3G4<br>S2 | None<br>None | IUCN_VU-Vulnerable | 100<br>100 | 304<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Buteo swainsoni***<br>Swainson's hawk | G5<br>S4 | None<br>Threatened | BLM_S-Sensitive<br>IUCN_LC-Least Concern | 120<br>120 | 2561<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Caecidotea tomalensis***<br>Tomales isopod | G2<br>S2S3 | None<br>None | | 75<br>100 | 6<br>S:2 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 |
| ***Callophrys mossii marinensis***<br>Marin elfin butterfly | G4T1<br>S2 | None<br>None | | 80<br>539 | 4<br>S:3 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 3 | 0 | 0 |
| ***Charadrius nivosus nivosus***<br>western snowy plover | G3T3<br>S3 | Threatened<br>None | CDFW_SSC-Species of Special Concern | 10<br>20 | 138<br>S:5 | 0 | 0 | 2 | 0 | 0 | 3 | 5 | 0 | 5 | 0 | 0 |
| ***Cicindela hirticollis gravida***<br>sandy beach tiger beetle | G5T2<br>S2 | None<br>None | | 10<br>10 | 34<br>S:3 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 1 | 1 | 1 |
| ***Circus hudsonius***<br>northern harrier | G5<br>S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFWS_BCC-Birds of Conservation Concern | | 54<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Coelus globosus***<br>globose dune beetle | G1G2<br>S1S2 | None<br>None | IUCN_VU-Vulnerable | 10<br>20 | 50<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Corynorhinus townsendii***<br>Townsend's big-eared bat | G4<br>S2 | None<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive | 10<br>470 | 635<br>S:7 | 0 | 1 | 0 | 0 | 1 | 5 | 5 | 2 | 6 | 1 | 0 |

# Summary Table Report

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Coturnicops noveboracensis***<br>yellow rail | G4<br>S2 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive<br>USFWS_BCC-Birds of Conservation Concern | 6<br>6 | 45<br>S:1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Cypseloides niger***<br>black swift | G4<br>S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_VU-Vulnerable<br>USFWS_BCC-Birds of Conservation Concern | 400<br>600 | 46<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Danaus plexippus plexippus pop. 1***<br>monarch - California overwintering population | G4T1T2Q<br>S2 | Candidate<br>None | IUCN_EN-Endangered<br>USFS_S-Sensitive | 20<br>250 | 396<br>S:14 | 0 | 7 | 3 | 0 | 2 | 2 | 9 | 5 | 12 | 1 | 1 |
| ***Dicamptodon ensatus***<br>California giant salamander | G2G3<br>S2S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_NT-Near Threatened | 50<br>800 | 234<br>S:22 | 4 | 1 | 0 | 0 | 0 | 17 | 14 | 8 | 22 | 0 | 0 |
| ***Emys marmorata***<br>western pond turtle | G3G4<br>S3 | Proposed Threatened<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_VU-Vulnerable<br>USFS_S-Sensitive | 1<br>400 | 1559<br>S:15 | 1 | 8 | 2 | 0 | 0 | 4 | 10 | 5 | 15 | 0 | 0 |
| ***Erethizon dorsatum***<br>North American porcupine | G5<br>S3 | None<br>None | IUCN_LC-Least Concern | 200<br>200 | 523<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Eucyclogobius newberryi***<br>tidewater goby | G3<br>S3 | Endangered<br>None | AFS_EN-Endangered<br>IUCN_NT-Near Threatened | 10<br>35 | 127<br>S:2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 |
| ***Eumetopias jubatus***<br>Steller sea lion | G3<br>S2 | Delisted<br>None | IUCN_NT-Near Threatened<br>MMC_SSC-Species of Special Concern | 15<br>15 | 38<br>S:1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Falco peregrinus anatum***<br>American peregrine falcon | G4T4<br>S3S4 | Delisted<br>Delisted | CDF_S-Sensitive | 84<br>357 | 75<br>S:2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 |
| ***Fratercula cirrhata***<br>tufted puffin | G5<br>S1S2 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern<br>USFWS_BCC-Birds of Conservation Concern | 100<br>100 | 17<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Geothlypis trichas sinuosa***<br>saltmarsh common yellowthroat | G5T3<br>S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>USFWS_BCC-Birds of Conservation Concern | 14<br>280 | 112<br>S:14 | 0 | 0 | 0 | 0 | 0 | 14 | 14 | 0 | 14 | 0 | 0 |
| ***Helminthoglypta nickliniana awania***<br>Peninsula coast range shoulderband | G3T1<br>S1 | None<br>None | IUCN_DD-Data Deficient | 200<br>200 | 1<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Helminthoglypta stiversiana williamsi***<br>Williams' bronze shoulderband | G1G2T1<br>S1 | None<br>None | IUCN_DD-Data Deficient | | 1<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Hesperoleucus venustus subditus***<br>southern coastal roach | GNRT2<br>S2 | None<br>None | CDFW_SSC-Species of Special Concern | 10<br>190 | 10<br>S:4 | 2 | 1 | 1 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 |
| ***Hydrobates homochroa***<br>ashy storm-petrel | G2<br>S2 | None<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>IUCN_EN-Endangered<br>USFWS_BCC-Birds of Conservation Concern | 40<br>40 | 21<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Hydrochara ricksecker***<br>Ricksecker's water scavenger beetle | G2?<br>S2? | None<br>None | | 160<br>160 | 13<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Icaricia icarioides parapheres***<br>Point Reyes blue butterfly | G5T1T2<br>S1 | None<br>None | | 10<br>10 | 2<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Ischnura gemina***<br>San Francisco forktail damselfly | G2<br>S2 | None<br>None | IUCN_EN-Endangered | 25<br>38 | 7<br>S:3 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 0 |
| ***Lasionycteris noctivagans***<br>silver-haired bat | G3G4<br>S3S4 | None<br>None | IUCN_LC-Least Concern | 580<br>580 | 139<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Lasiurus cinereus***<br>hoary bat | G3G4<br>S4 | None<br>None | IUCN_LC-Least Concern | 40<br>1,215 | 238<br>S:6 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 6 | 0 | 0 |
| ***Lasiurus frantzii***<br>western red bat | G4<br>S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern | 43<br>43 | 128<br>S:1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| ***Laterallus jamaicensis coturniculus***<br>California black rail | G3T1<br>S2 | None<br>Threatened | BLM_S-Sensitive<br>CDFW_FP-Fully Protected<br>IUCN_EN-Endangered | 0<br>375 | 304<br>S:13 | 1 | 1 | 0 | 0 | 0 | 11 | 11 | 2 | 13 | 0 | 0 |
| ***Lichnanthe ursina***<br>bumblebee scarab beetle | G2<br>S2 | None<br>None | | 15<br>230 | 8<br>S:4 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 0 | 0 |

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## California Department of Fish and Wildlife

## California Natural Diversity Database

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Linderiella occidentalis***<br>California linderiella | G2G3<br>S2S3 | None<br>None | IUCN_NT-Near Threatened | 111<br>111 | 508<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Melospiza melodia samuelis***<br>San Pablo song sparrow | G5T2<br>S2 | None<br>None | CDFW_SSC-Species of Special Concern<br>USFWS_BCC-Birds of Conservation Concern | 4<br>4 | 41<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Oncorhynchus kisutch pop. 4***<br>coho salmon - central California coast ESU | G5T2Q<br>S2 | Endangered<br>Endangered | AFS_EN-Endangered | 180<br>180 | 23<br>S:1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| ***Oncorhynchus mykiss irideus pop. 8***<br>steelhead - central California coast DPS | G5T3Q<br>S3 | Threatened<br>None | AFS_TH-Threatened | 40<br>120 | 44<br>S:2 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 0 |
| ***Pandion haliaetus***<br>osprey | G5<br>S4 | None<br>None | CDF_S-Sensitive<br>CDFW_WL-Watch List<br>IUCN_LC-Least Concern | 400<br>400 | 504<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Pogonichthys macrolepidotus***<br>Sacramento splittail | G3<br>S3 | None<br>None | AFS_VU-Vulnerable<br>CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern | 1<br>1 | 15<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Pomatiopsis binneyi***<br>robust walker | G1<br>S1 | None<br>None | | 150<br>150 | 2<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Pomatiopsis californica***<br>Pacific walker | G1<br>S1 | None<br>None | IUCN_DD-Data Deficient | 66<br>66 | 4<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Rallus obsoletus obsoletus***<br>California Ridgway's rail | G3T1<br>S2 | Endangered<br>Endangered | CDFW_FP-Fully Protected | 0<br>0 | 99<br>S:2 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 |
| ***Rana boylii pop. 1***<br>foothill yellow-legged frog - north coast DPS | G3T4<br>S4 | None<br>None | BLM_S-Sensitive<br>CDFW_SSC-Species of Special Concern<br>USFS_S-Sensitive | 37<br>1,681 | 1608<br>S:24 | 1 | 4 | 4 | 0 | 6 | 9 | 16 | 8 | 18 | 4 | 2 |
| ***Rana draytonii***<br>California red-legged frog | G2G3<br>S2S3 | Threatened<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_VU-Vulnerable | 6<br>1,140 | 1764<br>S:158 | 5 | 13 | 5 | 0 | 0 | 135 | 77 | 81 | 158 | 0 | 0 |
| ***Setophaga petechia***<br>yellow warbler | G5<br>S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern | 20<br>20 | 78<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Speyeria zerene myrtleae***<br>Myrtle's silverspot butterfly | G5T1<br>S1 | Endangered<br>None | | 10<br>200 | 17<br>S:4 | 0 | 2 | 1 | 0 | 0 | 1 | 2 | 2 | 4 | 0 | 0 |
| ***Spirinchus thaleichthys***<br>longfin smelt | G5<br>S1 | Candidate<br>Threatened | IUCN_LC-Least Concern | 0<br>0 | 46<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Stygobromus hyporheicus***<br>hyporheic amphipod | G1<br>SX | None<br>None | | 540<br>540 | 1<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Syncaris pacifica***<br>California freshwater shrimp | G2<br>S2 | Endangered<br>Endangered | IUCN_EN-Endangered | 30<br>120 | 20<br>S:3 | 0 | 0 | 2 | 0 | 0 | 1 | 3 | 0 | 3 | 0 | 0 |
| ***Taricha rivularis***<br>red-bellied newt | G2<br>S2 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern | 20<br>20 | 136<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Taxidea taxus***<br>American badger | G5<br>S3 | None<br>None | CDFW_SSC-Species of Special Concern<br>IUCN_LC-Least Concern | 40<br>200 | 645<br>S:6 | 0 | 0 | 1 | 0 | 0 | 5 | 5 | 1 | 6 | 0 | 0 |
| ***Trachusa gummifera***<br>San Francisco Bay Area leaf-cutter bee | G1<br>S1 | None<br>None | | 1,130<br>1,130 | 3<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Vespericola marinensis***<br>Marin hesperian | G2<br>S2 | None<br>None | | 10<br>580 | 23<br>S:18 | 0 | 0 | 0 | 0 | 0 | 18 | 18 | 0 | 18 | 0 | 0 |
| ***Zapus trinotatus orarius***<br>Point Reyes jumping mouse | G5T2<br>S2 | None<br>None | CDFW_SSC-Species of Special Concern | 40<br>200 | 5<br>S:3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 |

CALIFORNIA NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

## Search Results

**115** matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3812217:3812218:3812228:3812227:3812226:3812216:3712286:3712287**]

| ▲ SCIENTIFIC NAME | COMMON NAME | FAMILY | LIFEFORM | BLOOMING PERIOD | FED LIST | STATE LIST | GLOBAL RANK | STATE RANK | CA RARE PLANT RANK |
|---|---|---|---|---|---|---|---|---|---|
| *Abronia umbellata* var. *breviflora* | pink sand-verbena | Nyctaginaceae | annual herb | Jun-Oct | None | None | G4G5T2 | S2 | 1B.1 |
| *Agrostis blasdalei* | Blasdale's bent grass | Poaceae | perennial rhizomatous herb | May-Jul | None | None | G2G3 | S2 | 1B.2 |
| *Allium peninsulare* var. *franciscanum* | Franciscan onion | Alliaceae | perennial bulbiferous herb | (Apr)May-Jun | None | None | G4G5T2 | S2 | 1B.2 |
| *Alopecurus aequalis* var. *sonomensis* | Sonoma alopecurus | Poaceae | perennial herb | May-Jul | FE | None | G5T1 | S1 | 1B.1 |
| *Amorpha californica* var. *napensis* | Napa false indigo | Fabaceae | perennial deciduous shrub | Apr-Jul | None | None | G4T2 | S2 | 1B.2 |
| *Amsinckia lunaris* | bent-flowered fiddleneck | Boraginaceae | annual herb | Mar-Jun | None | None | G3 | S3 | 1B.2 |
| *Arabis blepharophylla* | coast rockcress | Brassicaceae | perennial herb | Feb-May | None | None | G4 | S4 | 4.3 |
| *Arctostaphylos densiflora* | Vine Hill manzanita | Ericaceae | perennial evergreen shrub | Feb-Apr | None | CE | G1 | S1 | 1B.1 |
| *Arctostaphylos montana* ssp. *montana* | Mt. Tamalpais manzanita | Ericaceae | perennial evergreen shrub | Feb-Apr | None | None | G3T3 | S3 | 1B.3 |
| *Arctostaphylos virgata* | Marin manzanita | Ericaceae | perennial evergreen shrub | Jan-Mar | None | None | G2 | S2 | 1B.2 |
| *Aspidotis carlotta-halliae* | Carlotta Hall's lace fern | Pteridaceae | perennial rhizomatous herb | Jan-Dec | None | None | G3 | S3 | 4.2 |
| *Astragalus breweri* | Brewer's milk-vetch | Fabaceae | annual herb | Apr-Jun | None | None | G3 | S3 | 4.2 |
| *Astragalus pycnostachyus* var. *pycnostachyus* | coastal marsh milk-vetch | Fabaceae | perennial herb | (Apr-May)Jun-Oct | None | None | G2T2 | S2 | 1B.2 |
| *Astragalus tener* var. *tener* | alkali milk-vetch | Fabaceae | annual herb | Mar-Jun | None | None | G2T1 | S1 | 1B.2 |
| *Blennosperma nanum* var. *robustum* | Point Reyes blennosperma | Asteraceae | annual herb | Feb-Apr | None | CR | G4T2 | S2 | 1B.2 |
| *Calamagrostis crassiglumis* | Thurber's reed grass | Poaceae | perennial rhizomatous herb | May-Aug | None | None | G3Q | S2 | 2B.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Calamagrostis ophitidis* | serpentine reed grass | Poaceae | perennial herb | Apr-Jul | None | None | G3 | S3 | 4.3 |
| *Calandrinia breweri* | Brewer's calandrinia | Montiaceae | annual herb | (Jan)Mar-Jun | None | None | G4 | S4 | 4.2 |
| *Calochortus umbellatus* | Oakland star-tulip | Liliaceae | perennial bulbiferous herb | Mar-May | None | None | G3? | S3? | 4.2 |
| *Calystegia purpurata* ssp. *saxicola* | coastal bluff morning-glory | Convolvulaceae | perennial herb | (Mar)Apr-Sep | None | None | G4T2T3 | S2S3 | 1B.2 |
| *Cardamine angulata* | seaside bittercress | Brassicaceae | perennial herb | (Jan)Mar-Jul | None | None | G4G5 | S3 | 2B.2 |
| *Carex buxbaumii* | Buxbaum's sedge | Cyperaceae | perennial rhizomatous herb | Mar-Aug | None | None | G5 | S3 | 4.2 |
| *Carex leptalea* | bristle-stalked sedge | Cyperaceae | perennial rhizomatous herb | Mar-Jul | None | None | G5 | S1 | 2B.2 |
| *Carex lyngbyei* | Lyngbye's sedge | Cyperaceae | perennial rhizomatous herb | Apr-Aug | None | None | G5 | S3 | 2B.2 |
| *Castilleja affinis* var. *neglecta* | Tiburon paintbrush | Orobanchaceae | perennial herb (hemiparasitic) | Apr-Jun | FE | CT | G4G5T1T2 | S1S2 | 1B.2 |
| *Castilleja ambigua* var. *ambigua* | johnny-nip | Orobanchaceae | annual herb (hemiparasitic) | Mar-Aug | None | None | G4T4 | S3S4 | 4.2 |
| *Castilleja ambigua* var. *humboldtiensis* | Humboldt Bay owl's-clover | Orobanchaceae | annual herb (hemiparasitic) | Apr-Aug | None | None | G4T2 | S2 | 1B.2 |
| *Castilleja leschkeana* | Point Reyes paintbrush | Orobanchaceae | perennial herb (hemiparasitic) | Jun | None | None | GX | SX | 1A |
| *Ceanothus decornutus* | Nicasio ceanothus | Rhamnaceae | perennial shrub | Mar-May | None | None | G1 | S1 | 1B.2 |
| *Ceanothus gloriosus* var. *exaltatus* | glory brush | Rhamnaceae | perennial evergreen shrub | Mar-Jun(Aug) | None | None | G4T4 | S4 | 4.3 |
| *Ceanothus gloriosus* var. *gloriosus* | Point Reyes ceanothus | Rhamnaceae | perennial evergreen shrub | Mar-May | None | None | G4T4 | S4 | 4.3 |
| *Ceanothus gloriosus* var. *porrectus* | Mt. Vision ceanothus | Rhamnaceae | perennial evergreen shrub | Feb-May | None | None | G4T2 | S2 | 1B.3 |
| *Ceanothus masonii* | Mason's ceanothus | Rhamnaceae | perennial evergreen shrub | Mar-Apr | None | CR | G1 | S1 | 1B.2 |
| *Chloropyron maritimum* ssp. *palustre* | Point Reyes salty bird's-beak | Orobanchaceae | annual herb (hemiparasitic) | Jun-Oct | None | None | G4?T2 | S2 | 1B.2 |
| *Chorizanthe cuspidata* var. *cuspidata* | San Francisco Bay spineflower | Polygonaceae | annual herb | Apr-Jul(Aug) | None | None | G2T1 | S1 | 1B.2 |
| *Chorizanthe cuspidata* var. *villosa* | woolly-headed spineflower | Polygonaceae | annual herb | May-Jul(Aug) | None | None | G2T2 | S2 | 1B.2 |
| *Chorizanthe valida* | Sonoma spineflower | Polygonaceae | annual herb | Jun-Aug | FE | CE | G1 | S1 | 1B.1 |
| *Cicuta maculata* var. *bolanderi* | Bolander's water-hemlock | Apiaceae | perennial herb | Jul-Sep | None | None | G5T4T5 | S2? | 2B.1 |
| *Cirsium andrewsii* | Franciscan thistle | Asteraceae | perennial herb | Mar-Jul | None | None | G3 | S3 | 1B.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Cirsium hydrophilum* var. *vaseyi* | Mt. Tamalpais thistle | Asteraceae | perennial herb | May-Aug | None | None | G2T1 | S1 | 1B.2 |
| *Clarkia concinna* ssp. *raichei* | Raiche's red ribbons | Onagraceae | annual herb | Apr-May | None | None | G5?T1 | S1 | 1B.1 |
| *Collinsia corymbosa* | round-headed collinsia | Plantaginaceae | annual herb | Apr-Jun | None | None | G1 | S1 | 1B.2 |
| *Delphinium bakeri* | Baker's larkspur | Ranunculaceae | perennial herb | Mar-May | FE | CE | G1 | S1 | 1B.1 |
| *Delphinium luteum* | golden larkspur | Ranunculaceae | perennial herb | Mar-May | FE | CR | G1 | S1 | 1B.1 |
| *Dichondra occidentalis* | western dichondra | Convolvulaceae | perennial rhizomatous herb | (Jan)Mar-Jul | None | None | G3G4 | S3S4 | 4.2 |
| *Dirca occidentalis* | western leatherwood | Thymelaeaceae | perennial deciduous shrub | Jan-Mar(Apr) | None | None | G2 | S2 | 1B.2 |
| *Eastwoodiella californica* | swamp harebell | Campanulaceae | perennial rhizomatous herb | Jun-Oct | None | None | G3 | S3 | 1B.2 |
| *Elymus californicus* | California bottle-brush grass | Poaceae | perennial herb | May-Aug(Nov) | None | None | G4 | S4 | 4.3 |
| *Entosthodon kochii* | Koch's cord moss | Funariaceae | moss | | None | None | G1 | S1 | 1B.3 |
| *Erigeron biolettii* | streamside daisy | Asteraceae | perennial herb | Jun-Oct | None | None | G3? | S3? | 3 |
| *Erigeron supplex* | supple daisy | Asteraceae | perennial herb | May-Jul | None | None | G2 | S2 | 1B.2 |
| *Eriogonum luteolum* var. *caninum* | Tiburon buckwheat | Polygonaceae | annual herb | May-Sep | None | None | G5T2 | S2 | 1B.2 |
| *Erysimum concinnum* | bluff wallflower | Brassicaceae | annual/perennial herb | Feb-Jul | None | None | G3 | S2 | 1B.2 |
| *Erysimum franciscanum* | San Francisco wallflower | Brassicaceae | perennial herb | Mar-Jun | None | None | G3 | S3 | 4.2 |
| *Fritillaria lanceolata* var. *tristulis* | Marin checker lily | Liliaceae | perennial bulbiferous herb | Feb-May | None | None | G5T2 | S2 | 1B.1 |
| *Fritillaria liliacea* | fragrant fritillary | Liliaceae | perennial bulbiferous herb | Feb-Apr | None | None | G2 | S2 | 1B.2 |
| *Gilia capitata* ssp. *chamissonis* | blue coast gilia | Polemoniaceae | annual herb | Apr-Jul | None | None | G5T2 | S2 | 1B.1 |
| *Gilia capitata* ssp. *tomentosa* | woolly-headed gilia | Polemoniaceae | annual herb | May-Jul | None | None | G5T2 | S2 | 1B.1 |
| *Gilia millefoliata* | dark-eyed gilia | Polemoniaceae | annual herb | Apr-Jul | None | None | G2 | S2 | 1B.2 |
| *Grindelia hirsutula* var. *maritima* | San Francisco gumplant | Asteraceae | perennial herb | Jun-Sep | None | None | G5T1Q | S1 | 3.2 |
| *Hemizonia congesta* ssp. *congesta* | congested-headed hayfield tarplant | Asteraceae | annual herb | Apr-Nov | None | None | G5T2 | S2 | 1B.2 |
| *Hesperevax sparsiflora* var. *brevifolia* | short-leaved evax | Asteraceae | annual herb | Mar-Jun | None | None | G4T3 | S3 | 1B.2 |
| *Hesperolinon congestum* | Marin western flax | Linaceae | annual herb | Apr-Jul | FT | CT | G1 | S1 | 1B.1 |
| *Heteranthera dubia* | water star-grass | Pontederiaceae | perennial herb (aquatic) | Jul-Oct | None | None | G5 | S2 | 2B.2 |
| *Horkelia cuneata* var. *sericea* | Kellogg's horkelia | Rosaceae | perennial herb | Apr-Sep | None | None | G4T1? | S1? | 1B.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Horkelia marinensis* | Point Reyes horkelia | Rosaceae | perennial herb | May-Sep | None | None | G2 | S2 | 1B.2 |
| *Horkelia tenuiloba* | thin-lobed horkelia | Rosaceae | perennial herb | May-Jul(Aug) | None | None | G2 | S2 | 1B.2 |
| *Hosackia gracilis* | harlequin lotus | Fabaceae | perennial rhizomatous herb | Mar-Jul | None | None | G3G4 | S3 | 4.2 |
| *Hypogymnia schizidiata* | island tube lichen | Parmeliaceae | foliose lichen | | None | None | G2G3 | S2 | 1B.3 |
| *Iris longipetala* | coast iris | Iridaceae | perennial rhizomatous herb | Mar-May(Jun) | None | None | G3 | S3 | 4.2 |
| *Lasthenia californica* ssp. *bakeri* | Baker's goldfields | Asteraceae | perennial herb | Apr-Oct | None | None | G3T1 | S1 | 1B.2 |
| *Lasthenia californica* ssp. *macrantha* | perennial goldfields | Asteraceae | perennial herb | Jan-Nov | None | None | G3T2 | S2 | 1B.2 |
| *Layia carnosa* | beach layia | Asteraceae | annual herb | Mar-Jul | FT | CE | G2 | S2 | 1B.1 |
| *Leptosiphon aureus* | bristly leptosiphon | Polemoniaceae | annual herb | Apr-Jul | None | None | G4? | S4? | 4.2 |
| *Leptosiphon grandiflorus* | large-flowered leptosiphon | Polemoniaceae | annual herb | Apr-Aug | None | None | G3G4 | S3S4 | 4.2 |
| *Leptosiphon latisectus* | broad-lobed leptosiphon | Polemoniaceae | annual herb | Apr-Jun | None | None | G4 | S4 | 4.3 |
| *Leptosiphon rosaceus* | rose leptosiphon | Polemoniaceae | annual herb | Apr-Jul | None | None | G1 | S1 | 1B.1 |
| *Lessingia hololeuca* | woolly-headed lessingia | Asteraceae | annual herb | Jun-Oct | None | None | G2G3 | S2S3 | 3 |
| *Lessingia micradenia* var. *micradenia* | Tamalpais lessingia | Asteraceae | annual herb | (Jun)Jul-Oct | None | None | G2T2 | S2 | 1B.2 |
| *Lilaeopsis masonii* | Mason's lilaeopsis | Apiaceae | perennial rhizomatous herb | Apr-Nov | None | CR | G2 | S2 | 1B.1 |
| *Lilium maritimum* | coast lily | Liliaceae | perennial bulbiferous herb | May-Aug | None | None | G2 | S2 | 1B.1 |
| *Lilium pardalinum* ssp. *pitkinense* | Pitkin Marsh lily | Liliaceae | perennial bulbiferous herb | Jun-Jul | FE | CE | G5T1 | S1 | 1B.1 |
| *Limnanthes douglasii* ssp. *sulphurea* | Point Reyes meadowfoam | Limnanthaceae | annual herb | Mar-May | None | CE | G4T1 | S1 | 1B.2 |
| *Lupinus tidestromii* | Tidestrom's lupine | Fabaceae | perennial rhizomatous herb | Apr-Jun | FE | CE | G1 | S1 | 1B.1 |
| *Microseris paludosa* | marsh microseris | Asteraceae | perennial herb | Apr-Jun(Jul) | None | None | G2 | S2 | 1B.2 |
| *Mielichhoferia elongata* | elongate copper moss | Mielichhoferiaceae | moss | | None | None | G5 | S3S4 | 4.3 |
| *Monardella sinuata* ssp. *nigrescens* | northern curly-leaved monardella | Lamiaceae | annual herb | (Apr)May-Jul(Aug-Sep) | None | None | G3T2 | S2 | 1B.2 |
| *Navarretia rosulata* | Marin County navarretia | Polemoniaceae | annual herb | May-Jul | None | None | G2 | S2 | 1B.2 |
| *Perideridia gairdneri* ssp. *gairdneri* | Gairdner's yampah | Apiaceae | perennial herb | Jun-Oct | None | None | G5T3T4 | S3S4 | 4.2 |
| *Phacelia insularis* var. *continentis* | North Coast phacelia | Hydrophyllaceae | annual herb | Mar-May | None | None | G2T2 | S2 | 1B.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Piperia elegans* ssp. *decurtata* | Point Reyes rein orchid | Orchidaceae | perennial herb | Jul-Oct | None | None | G4T1 | S1 | 1B.1 |
| *Piperia michaelii* | Michael's rein orchid | Orchidaceae | perennial herb | Apr-Aug | None | None | G3 | S3 | 4.2 |
| *Plagiobothrys mollis* var. *vestitus* | Petaluma popcornflower | Boraginaceae | perennial herb | Jun-Jul | None | None | G4?TX | SX | 1A |
| *Pleuropogon hooverianus* | North Coast semaphore grass | Poaceae | perennial rhizomatous herb | Apr-Jun | None | CT | G2 | S2 | 1B.1 |
| *Pleuropogon refractus* | nodding semaphore grass | Poaceae | perennial rhizomatous herb | (Feb-Mar)Apr-Aug | None | None | G4 | S4 | 4.2 |
| *Polygonum marinense* | Marin knotweed | Polygonaceae | annual herb | (Apr)May-Aug(Oct) | None | None | G2Q | S2 | 3.1 |
| *Quercus parvula* var. *tamalpaisensis* | Tamalpais oak | Fagaceae | perennial evergreen shrub | Mar-Apr | None | None | G4T2 | S2 | 1B.3 |
| *Ranunculus lobbii* | Lobb's aquatic buttercup | Ranunculaceae | annual herb (aquatic) | Feb-May | None | None | G4 | S3 | 4.2 |
| *Rhynchospora californica* | California beaked-rush | Cyperaceae | perennial rhizomatous herb | May-Jul | None | None | G1 | S1 | 1B.1 |
| *Sagittaria sanfordii* | Sanford's arrowhead | Alismataceae | perennial rhizomatous herb (emergent) | May-Oct(Nov) | None | None | G3 | S3 | 1B.2 |
| *Sidalcea calycosa* ssp. *rhizomata* | Point Reyes checkerbloom | Malvaceae | perennial rhizomatous herb | Apr-Sep | None | None | G5T2 | S2 | 1B.2 |
| *Sidalcea hickmanii* ssp. *viridis* | Marin checkerbloom | Malvaceae | perennial herb | May-Jun | None | None | G2TH | SH | 1B.1 |
| *Sidalcea malviflora* ssp. *purpurea* | purple-stemmed checkerbloom | Malvaceae | perennial rhizomatous herb | May-Jun | None | None | G5T1 | S1 | 1B.2 |
| *Silene scouleri* ssp. *scouleri* | Scouler's catchfly | Caryophyllaceae | perennial herb | (Mar-May)Jun-Aug(Sep) | None | None | G5T4T5 | S2S3 | 2B.2 |
| *Stebbinsoseris decipiens* | Santa Cruz microseris | Asteraceae | annual herb | Apr-May | None | None | G2 | S2 | 1B.2 |
| *Stellaria littoralis* | beach starwort | Caryophyllaceae | perennial rhizomatous herb | Mar-Jul | None | None | G3 | S3 | 4.2 |
| *Streptanthus anomalus* | Mount Burdell jewelflower | Brassicaceae | annual herb | May-Jun | None | None | G1 | S1 | 1B.1 |
| *Streptanthus batrachopus* | Tamalpais jewelflower | Brassicaceae | annual herb | Apr-Jul | None | None | G2 | S2 | 1B.3 |
| *Streptanthus glandulosus* ssp. *pulchellus* | Mt. Tamalpais bristly jewelflower | Brassicaceae | annual herb | May-Jul(Aug) | None | None | G4T2 | S2 | 1B.2 |
| *Thamnolia vermicularis* | whiteworm lichen | Icmadophilaceae | fruticose lichen (terricolous) | | None | None | G5 | S1 | 2B.1 |
| *Toxicoscordion fontanum* | marsh zigadenus | Melanthiaceae | perennial bulbiferous herb | Apr-Jul | None | None | G3 | S3 | 4.2 |
| *Trifolium amoenum* | two-fork clover | Fabaceae | annual herb | Apr-Jun | FE | None | G1 | S1 | 1B.1 |
| *Trifolium polyodon* | Pacific Grove clover | Fabaceae | annual herb | Apr-Jun(Jul) | None | CR | G1 | S1 | 1B.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Triphysaria floribunda* | San Francisco owl's-clover | Orobanchaceae | annual herb | Apr-Jun | None | None | G2? | S2? | 1B.2 |
| *Triquetrella californica* | coastal triquetrella | Pottiaceae | moss | | None | None | G2 | S2 | 1B.2 |

Showing 1 to 115 of 115 entries

**Suggested Citation:**

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**IPaC** **U.S. Fish & Wildlife Service**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.



## Location

Marin County, California


## Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

# Birds

| NAME | STATUS |
|---|---|
| California Least Tern Sternula antillarum browni<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/8104 | Endangered |
| Marbled Murrelet Brachyramphus marmoratus<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/4467 | Threatened |
| Northern Spotted Owl Strix occidentalis caurina<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/1123 | Threatened |
| Western Snowy Plover Charadrius nivosus nivosus<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/8035 | Threatened |

# Reptiles

| NAME | STATUS |
|---|---|
| Green Sea Turtle Chelonia mydas<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/6199 | Threatened |
| Northwestern Pond Turtle Actinemys marmorata<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/1111 | Proposed Threatened |

# Amphibians

| NAME | STATUS |
|---|---|
| California Red-legged Frog Rana draytonii<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/2891 | Threatened |

# Fishes

| NAME | STATUS |
|---|---|
| Tidewater Goby Eucyclogobius newberryi<br>Wherever found<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>https://ecos.fws.gov/ecp/species/57 | Endangered |

# Insects

| NAME | STATUS |
|---|---|
| Monarch Butterfly Danaus plexippus<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9743 | Candidate |
| Myrtle's Silverspot Butterfly Speyeria zerene myrtleae<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/6929 | Endangered |

# Flowering Plants

| NAME | STATUS |
|---|---|
| Showy Indian Clover Trifolium amoenum<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/6459 | Endangered |
| Sonoma Alopecurus Alopecurus aequalis var. sonomensis<br>Wherever found<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/557 | Endangered |

# Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

# Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

**There are bald and/or golden eagles in your project area.**

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|

Bald Eagle *Haliaeetus leucocephalus* — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Golden Eagle *Aquila chrysaetos* — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

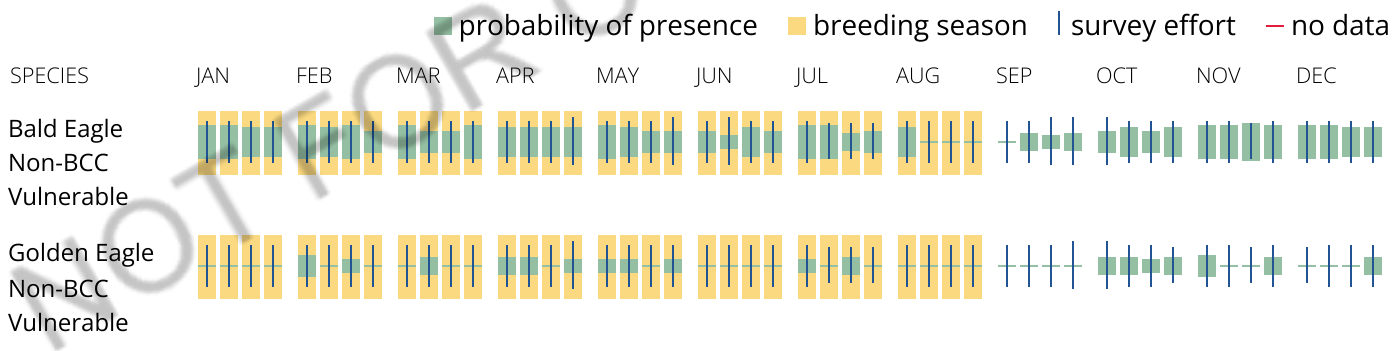
**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.






**What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?**

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.



# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.



| NAME | BREEDING SEASON |
|---|---|
| Allen's Hummingbird Selasphorus sasin<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9637 | Breeds Feb 1 to Jul 15 |
| Bald Eagle Haliaeetus leucocephalus<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Jan 1 to Aug 31 |
| Belding's Savannah Sparrow Passerculus sandwichensis beldingi<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/8 | Breeds Apr 1 to Aug 15 |
| Black Oystercatcher Haematopus bachmani<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9591 | Breeds Apr 15 to Oct 31 |

Black Swift Cypseloides niger — Breeds Jun 15 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8878

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull Larus californicus — Breeds Mar 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cassin's Finch Carpodacus cassinii — Breeds May 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9462

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow Rail Coturnicops noveboracensis — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9476

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

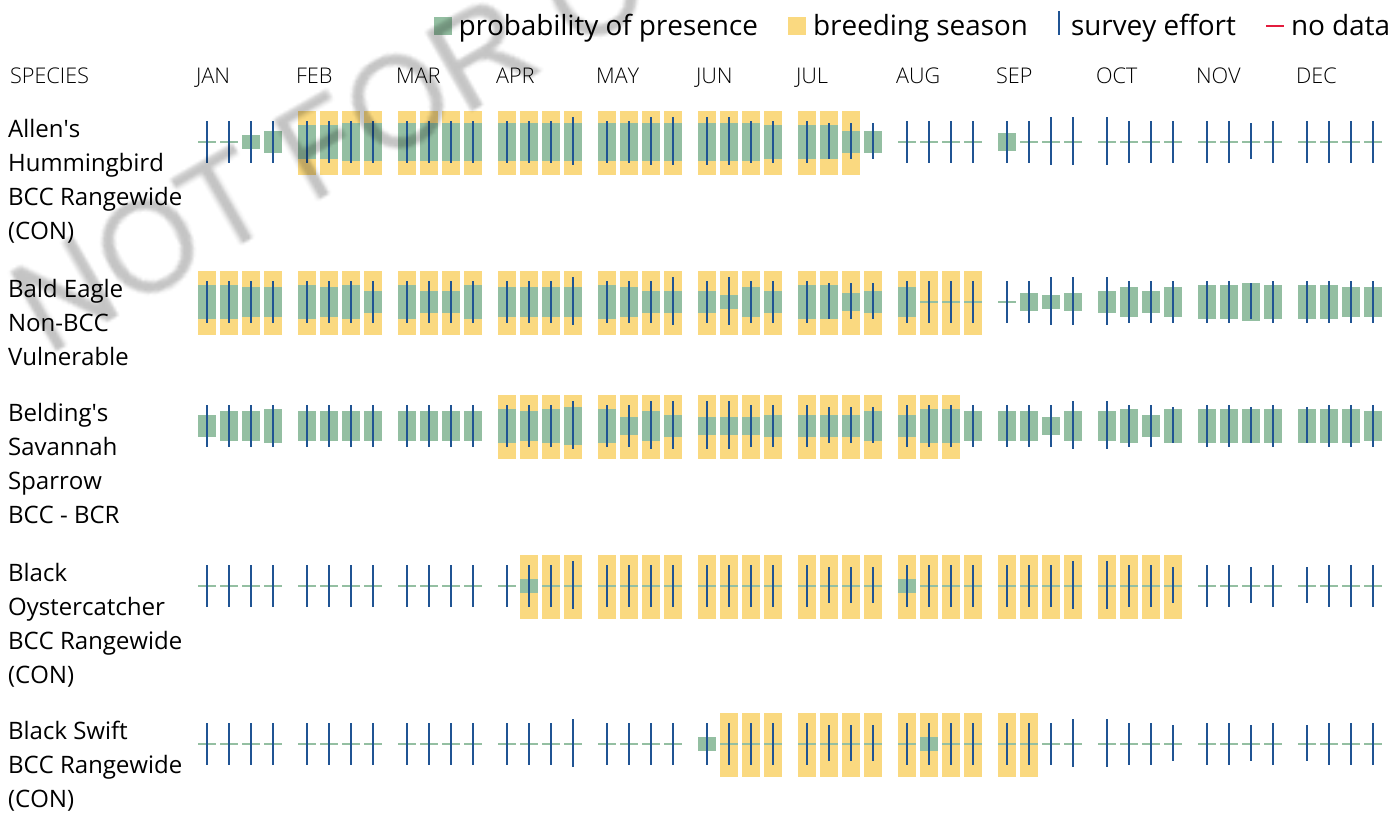
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

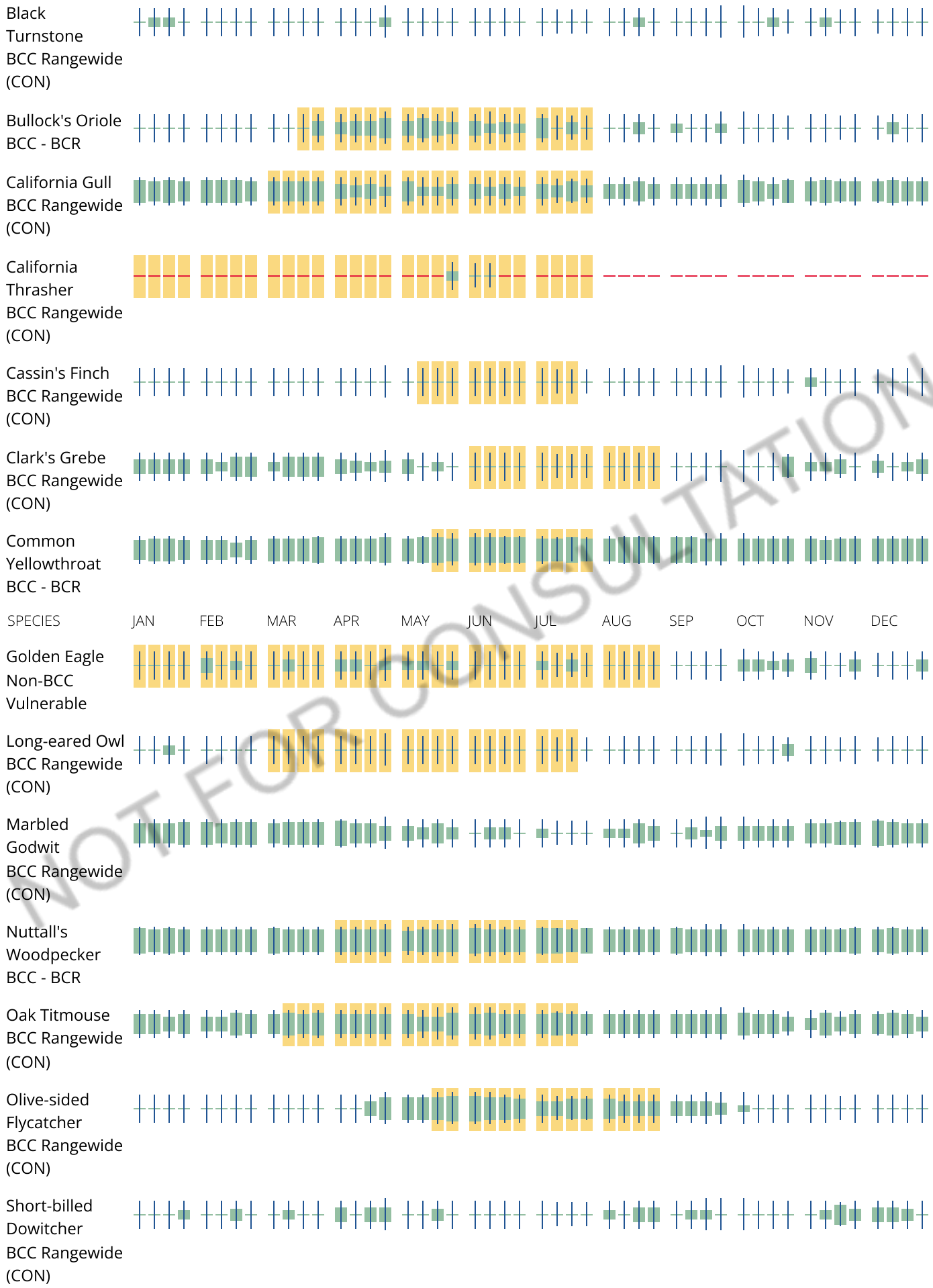
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

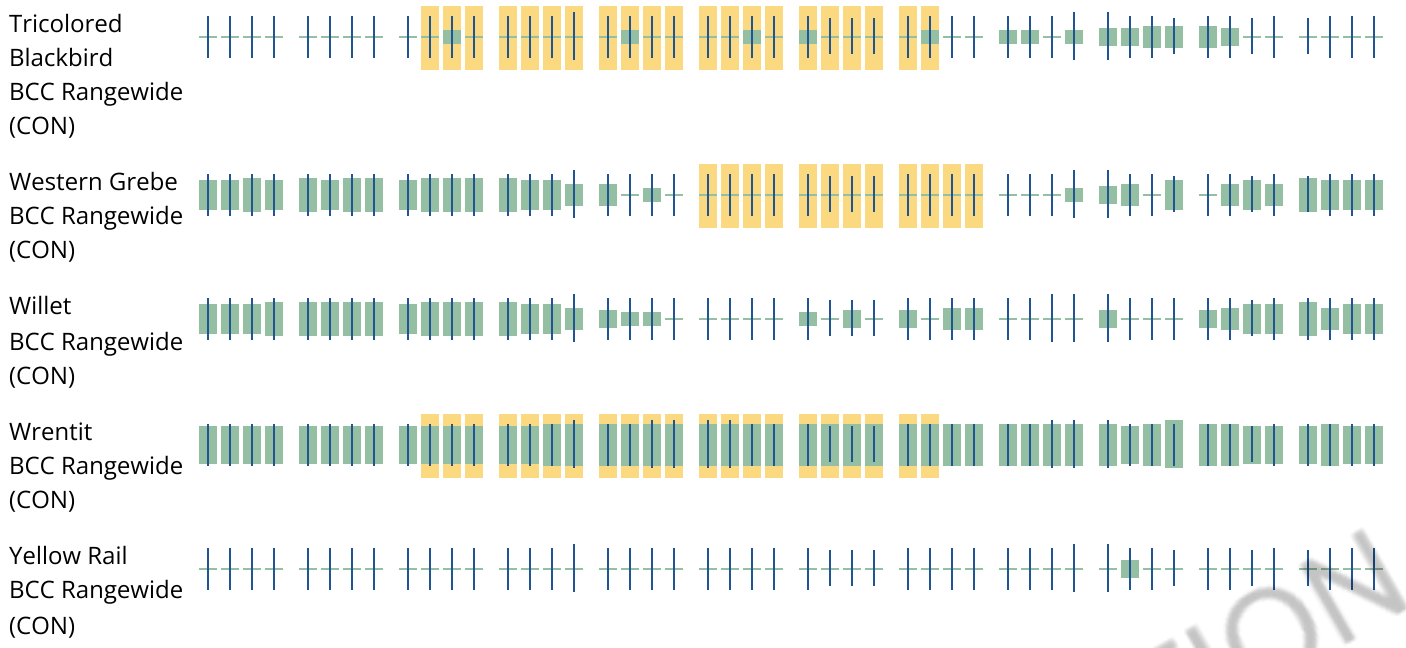
**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.










**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.



# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

## Fish hatcheries

There are no fish hatcheries at this location.

# Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

## This location did not intersect any wetlands mapped by NWI.

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.



### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies.

Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX E

# POTENTIAL FOR SPECIAL-STATUS SPECIES TO OCCUR IN THE PROJECT STUDY AREA

**Table A1. Special Status Plant Species Potential to Occur**

| Scientific Name/ Common Name | Status[1] | Habitat | Blooming Period | Potential for Occurrence |
|---|---|---|---|---|
| *Agrostis blasdalei*<br>Blasdale's bent grass | 1B.2 | Coastal dunes, coastal bluff scrub, coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5-365 m. | May-Jul | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Alopecurus aequalis var. sonomensis*<br>Sonoma alopecurus | FE<br>1B.1 | Freshwater marshes and swamps, riparian scrub. Wet areas, marshes, and riparian banks, with other wetland species. 3-360 m. | May-Jul | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Arctostaphylos virgata*<br>Marin manzanita | 1B.2 | Broadleafed upland forest, closed-cone coniferous forest, chaparral, north coast coniferous forest. On sandstone or granitic. 1-800 m. | Dec-Feb | **None.** Marginally suitable forest habitat and suitable soil conditions are present within the Project Study Area. However, no *Manzanita* species were observed during the survey. |
| *Astragalus pycnostachyus var. pycnostachyus*<br>coastal marsh milk-vetch | 1B.2 | Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dune or along streams or coastal salt marshes. 0-155 m. | Jun-Sep | **None.** Suitable coastal habitat and/or hydrological conditions are absent from the Project Study Area. |
| *Blennosperma nanum var. robustum*<br>Point Reyes blennosperma | 1B.2 | Coastal prairie, coastal scrub. On open coastal hill in sandy soil. 5-215 m. | Jan-Apr | **None.** Suitable coastal habitat is absent from the Project Study Area. |

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| *Calamagrostis crassiglumis*<br>Thurber's reed grass | 2B.1 | Coastal scrub, marshes and swamps. Usually in marshy swales surrounded by grassland or coastal scrub. 5-50 m. | Jun-Aug | **None.** Suitable coastal habitat and/or hydrological conditions are absent from the Project Study Area. |
| *Calystegia purpurata ssp. saxicola*<br>coastal bluff morning-glory | 1B.2 | Coastal dunes, coastal scrub, coastal bluff scrub, north coast coniferous forest. 4-165 m. | May-Jun | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Campanula californica*<br>swamp harebell | 1B.2 | Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marsh, north coast coniferous forest. Bogs and marshes in a variety of habitats; uncommon where it occurs. 1-520 m. | Jun-Sep | **None.** Suitable bogs and marshes are absent from the Project Study Area. |
| *Carex leptalea*<br>bristle-stalked sedge | 2B.2 | Bogs and fens, meadows and seeps, marshes and swamps. Mostly known from bogs and wet meadows. 3-1395 m. | Jun-Aug | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Carex lyngbyei*<br>Lyngbye's sedge | 2B.2 | Marshes and swamps (brackish or freshwater). 0-200 m. | May-Jul | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Castilleja ambigua var. humboldtiensis*<br>Humboldt Bay owl's-clover | 1B.2 | Marshes and swamps. In coastal saltmarsh with Spartina, Distichlis, Salicornia, Jaumea. 0-20 m. | May-Jun | **None.** Suitable hydrological conditions, as well as associated plant communities are absent from the Project Study Area. |

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| *Castilleja leschkeana*<br>Point Reyes paintbrush | 1A | Marshes and swamps (coastal). 0-25 m. | (No data) | **None.** This species is presumed extinct. |
| *Ceanothus gloriosus var. porrectus*<br>Mt. Vision ceanothus | 1B.3 | Closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Low shrub in a variety of habitats on Pt. Reyes; sandy soils. 10-335 m. | Mar-May | **None.** While marginally suitable habitat is present within the Project Study Area, along with suitable soil conditions, no species within the *Ceanothus* genus were observed within nor adjacent to the Project Study Area. |
| *Chloropyron maritimum ssp. palustre*<br>Point Reyes salty bird's-beak | 1B.2 | Coastal salt marsh. Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. 0-115 m. | May-Oct | **None.** Suitable hydrological conditions, as well as associated plant communities are absent from the Project Study Area. |
| *Chorizanthe cuspidata var. villosa*<br>woolly-headed spineflower | 1B.2 | Coastal scrub, coastal dunes, coastal prairie. Sandy places near the beach. 5-60 m. | May-Aug | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Cicuta maculata var. bolanderi*<br>Bolander's water-hemlock | 2B.1 | Marshes and swamps. In fresh or brackish water. 0-20 m. | Jul-Sep | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Cirsium andrewsii*<br>Franciscan thistle | 1B.2 | Coastal bluff scrub, broadleafed upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0-295 m. | May-Sep | **None.** This species is known to require relatively coastal prairie habitat to be in the vicinity. Such coastal prairie is absent from the vicinity of the Project Study Area. |

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| *Dirca occidentalis*<br>western leatherwood | 1B.2 | Broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 20-640 m. | Nov-Mar | **None.** While marginally suitable habitat, along with very marginally suitable hydrological conditions, are present within the Project Study Area, this species was not observed during surveys that coincided with the blooming period. |
| *Erysimum concinnum*<br>bluff wallflower | 1B.2 | Coastal dunes, coastal bluff scrub, coastal prairie. More or less a coastal generalist with coastal habitat types. 3-60 m. | Mar-Jun | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Fritillaria lanceolata var. tristulis*<br>Marin checker lily | 1B.1 | Coastal bluff scrub, coastal scrub, coastal prairie. Occurrences reported from canyons and riparian areas as well as rock outcrops; often on serpentine. 5-305 m. | Mar-Jun | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Fritillaria liliacea*<br>fragrant fritillary | 1B.2 | Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 3-385 m. | Feb-Apr | **None.** Suitable coastal habitat, as well as suitable soil conditions, are absent from the Project Study Area. |
| *Gilia capitata ssp. chamissonis*<br>blue coast gilia | 1B.1 | Coastal dunes, costal scrub. 3-200 m. | Apr-Jul | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Gilia millefoliata*<br>dark-eyed gilia | 1B.2 | Coastal dunes. 1-60 m. | Mar-Jul | **None.** Suitable coastal dune habitat is absent from the Project Study Area. |

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| *Hemizonia congesta ssp. congesta*<br>congested-headed hayfield tarplant | 1B.2 | Valley and foothill grassland. Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 5-520 m. | May-Nov | **None.** Marginally suitable disturbed, grassy habitat is present within the Project Study Area. However, this species was not observed within the Project Study Area during protocol-level plant surveys. |
| *Hesperevax sparsiflora var. brevifolia*<br>short-leaved evax | 1B.2 | Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0-640 m. | Mar-Jul | **None.** This species is associated with the soils present within the Study Area and is known to occasionally occur within disturbed areas. However, this species was not observed within the Project Study Area during protocol-level plant surveys. |
| *Heteranthera dubia*<br>water star-grass | 2B.2 | Marshes and swamps. Alkaline, still, or slow-moving water. Requires a pH of 7 or higher, usually in slightly eutrophic waters. 15-1510 m. | Jul-Aug | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Horkelia cuneata var. sericea*<br>Kellogg's horkelia | 1B.1 | Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 5-430 m. | Apr-Aug | **None.** Suitable old dunes or coastal sandhills are absent from the Project Study Area. |
| *Horkelia marinensis*<br>Point Reyes horkelia | 1B.2 | Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 m. | May-Sep | **None.** Suitable coastal habitat is absent from the Project Study Area. |

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| *Hypogymnia schizidiata*<br>island tube lichen | 1B.3 | Chaparral, closed-cone coniferous forest. On bark and wood of hardwoods and conifers. 255-545 m. | N/A<br>(Lichen) | **None.** The project is outside the known elevation range for this species. |
| *Lasthenia californica ssp. macrantha*<br>perennial goldfields | 1B.2 | Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m. | May-Aug | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Layia carnosa*<br>beach layia | FT<br>SE<br>1B.1 | Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 3-30 m. | Apr-Jul | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Leptosiphon rosaceus*<br>rose leptosiphon | 1B.1 | Coastal bluff scrub. 10-140 m. | Apr-Jun | **None.** Suitable coastal bluff scrub habitat is absent from the Project Study Area. |
| *Lilaeopsis masonii*<br>Mason's lilaeopsis | 1B.1 | Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. In brackish or freshwater. 0-10 m. | Jun-Aug | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Lilium maritimum*<br>coast lily | 1B.1 | Closed-cone coniferous forest, coastal prairie, coastal scrub, broadleafed upland forest, north coast coniferous forest, marshes and swamps. Historically in sandy soil, often on raised hummocks or bogs; today mostly in roadside ditches. 4-490 m. | May—Jul | **None.** Suitable hydrological conditions are absent from the Project Study Area. |

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| *Microseris paludosa*<br>marsh microseris | 1B.2 | Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m. | Apr-Jun | **None.** Suitable woodland or grassland habitat is absent from the Project Study Area |
| *Monardella sinuata ssp. nigrescens*<br>northern curly-leaved monardella | 1B.2 | Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 10-245 m. | May-Jul | **None.** Suitable coastal habitat, chaparral, and/or lower montane coniferous forest is absent from the Project Study Area. |
| *Phacelia insularis var. continentis*<br>North Coast phacelia | 1B.2 | Coastal bluff scrub, coastal dunes. Open maritime bluffs, sandy soil, sometimes rocky habitats. 0-155 m. | Mar-May | **None.** Suitable coastal habitat is absent from the Project Study Area. |
| *Rhynchospora californica*<br>California beaked-rush | 1B.1 | Bogs and fens, marshes and swamps, lower montane coniferous forest, meadows and seeps. Freshwater seeps and open marshy areas. 45-270 m. | May-Jul | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Sidalcea calycosa ssp. rhizomata*<br>Point Reyes checkerbloom | 1B.2 | Marshes and swamps. Freshwater marshes near the coast.5-95 m. | May-Jul | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Silene scouleri ssp. scouleri*<br>Scouler's catchfly | 2B.2 | Coastal bluff scrub, coastal prairie, valley and foothill grassland. 5-315 m. | Jun-Aug | **None.** Suitable coastal habitat is absent from the Project Study Area. |

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| *Trifolium amoenum*<br>two-fork clover | FE<br>1B.1 | Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5-310 m. | Apr-Jun | **None.** Suitable habitat and soil conditions are absent from the Project Study Area. |
| *Trifolium polyodon*<br>Pacific Grove clover | 1B.1 | Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 5-260 m. | Apr-Jun | **None.** Suitable hydrological conditions are absent from the Project Study Area. |
| *Triphysaria floribunda*<br>San Francisco owl's-clover | 1B.2 | Coastal prairie, coastal scrub, valley and foothill grassland. On serpentine and non-serpentine substrate (such as at Pt. Reyes). 1-150 m. | Apr-May | **None.** This species is known to occur along the fringes, or the near vicinity of coastal prairie habitat, which is absent from the Project Study Area. |
| *Triquetrella californica*<br>coastal triquetrella | 1B.2 | Coastal bluff scrub, coastal scrub. Grows within 30m from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 20-1175 m. | N/A<br>(Moss) | **None.** Suitable coastal habitat is absent from the Project Study Area. |

[1]FE/FT – Federally endangered/ threatened
CE/CT – California endangered/threatened
California Rare Plant Rank

1A – Plants presumed extirpated in California and either rare or extinct elsewhere.
1B – Plants rare, threatened, or endangered in California and elsewhere.
2A – Plants presumed extirpated in California but common elsewhere.
2B – Plants rare, threatened, or endangered in California but more common elsewhere.

**Table A2. Special Status Wildlife Species Potential to Occur**

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| **Invertebrates** | | | |
| *Syncaris pacifica* California freshwater shrimp | FE, SE | Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water. | **No Potential.** There is no perennial stream habitat within or adjacent to the Project Study Area. |
| *Danaus plexippus plexippus* population 1 Monarch butterfly – California overwintering population | FC | Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby. | **No Potential.** There are no sheltered groves of Eucalyptus, Monterey cypress, or Monterey pine that could serve as overwintering habitat within or adjacent to the Project Study Area. |
| *Speyeria zerene myrtleae* Myrtle's silverspot butterfly | FE | Restricted to the fog belt of northern Marin and southernmost Sonoma County, including the Point Reyes peninsula; extirpated from coastal San Mateo County. Occurs in coastal prairie, dunes, and grassland. Larval foodplant is typically Viola adunca. Adult flight season may range from late June to early September. | **No Potential.** There is no coastal prairie, dune, or grassland within or adjacent to the Project Study Area. Additionally, this species' larval host plant, *Viola adunca* is not found within the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Bombus occidentalis* Western bumble bee | SC | Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared. Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g. mammal burrows). Many plant species are visited and pollinated. | **No Potential.** The Project Study Area is outside the current known range of this species. Additionally, the Project Study Area lacks nest building substrate. |
| **Fish** | | | |
| *Oncorhynchus mykiss irideus* population 8 Steelhead – central California coast DPS | FT, SSC | Requires beds of loose, silt-free, well-oxygenated coarse gravel for spawning. After hatching, juveniles spend at least one summer in the freshwater rearing areas, so the stream must have either perennial flow or cool intermittent pools with subsurface flow, shade, food, and shelter during the dry season. | **No Potential.** There is no stream habitat within or adjacent to the Project Study Area. |
| *Oncorhynchus kisutch* population 4 coho salmon – central California coast ESU | FE, SE | Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Occurs inland and in coastal marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen. | **No Potential.** There is no stream habitat within or adjacent to the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Spirinchus thaleichthys* Longfin smelt | FP, ST | Euryhaline, nektonic, and anadromous. Found in open waters of estuaries, mostly in the middle or the bottom of the water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater. | **No Potential.** There is no aquatic habitat within or adjacent to the Project Study Area. |
| *Hesperoleucus venustus subditus* Southern coastal roach | SSC | Mainly found in small, warm, intermittent streams, but can be found in larger, colder streams. Breeds in gravel beds. Ranges from Petaluma and Napa Rivers in the north to San Benito River and Arroyo Seco in the south. | **No Potential.** There is no perennial or intermittent stream habitat within or adjacent to the Project Study Area. |
| *Eucyclogobius newberryi* Tidewater goby | FE | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels. | **No Potential.** There is no brackish or estuarine aquatic habitat within or adjacent to the Project Study Area. |
| **Reptiles and Amphibians** | | | |
| *Dicamptodon ensatus* California giant salamander | SSC | Wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults occur in wet forests under rocks and logs near streams and lakes. | **No Potential.** There is no aquatic habitat within or adjacent to the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Rana draytonii*<br>California red-legged frog | FT, SSC | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains. | **No Potential.** There is no aquatic upland or aquatic breeding habitat within or adjacent to the Project Study Area. Additionally, the Project Study Area is not located within or near a dispersal corridor between suitable aquatic upland and aquatic breeding habitat. |
| *Rana boylii*<br>foothill yellow-legged frog | SSC | Found in or near rocky streams in a variety of habitats. Prefers partly-shaded, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates. | **No Potential.** There is no aquatic habitat within or adjacent to the Project Study Area. |
| *Emys marmorata*<br>Western pond turtle | FP, SSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation below 6,000 feet elevation. Needs basking sites and sandy banks or grassy open fields for upland breeding habitat. | **No Potential.** There is no aquatic habitat within or adjacent to the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Chelonia mydas*<br>Green sea turtle | FT | Found in shallow waters inside reefs, bays and inlets with marine grass and algae. Open beaches with a sloping platform and minimal disturbance are required for nesting. This species exhibits high site fidelity. | **No Potential.** There is no marine or beach habitat within or adjacent to the Project Study Area. |
| **Birds** | | | |
| *Charadrius nivosus nivosus*<br>Western snowy plover | FE, SSC | Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils. | **No Potential.** There is no sandy beach habitat within or adjacent to the Project Study Area. |
| *Laterallus jamaicensis coturniculus*<br>California black rail | ST | Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | **No Potential.** There is no marsh habitat within or adjacent to the Project Study Area. |
| *Coturnicops noveboracensis*<br>Yellow Rail | SSC, BCC | Summer resident in eastern Sierra Nevada in Mono County, breeding in shallow freshwater marshes and wet meadows with dense vegetation. Also a rare winter visitor along the coast and other portions of the state. Extremely cryptic. | **No Potential.** There is no marsh habitat within or adjacent to the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Brachyramphus marmoratus* Marbled murrelet | FT, SE | Fields near-shore. Nests along the coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir. | **No Potential.** There is no old growth redwood grove habitat within or adjacent to the Project Study Area. |
| *Pandion haliaetus* Osprey | WL | Summer resident. Occurs in direct association with large bodies of water: ocean shores, bays, lakes, and rivers. Preys on fishes. Prefers large trees and snags near water for nesting and roosting; also uses man-made structures (utility towers, channel markers, unused cranes). May travel several miles from nest sites to foraging areas. | **Moderate Potential.** There are suitable nesting trees in the vicinity of the Project Study Area, as well as close proximity to fish bearing water. |
| *Circus hudsonius* Northern harrier | SSC | Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates. | **No Potential.** There is no open grassland habitat within or adjacent to the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Strix occidentalis caurina* Northern spotted owl | FT, ST | Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California). Preys on mammals. | **Moderate Potential.** Four NSO activity centers are located within 1 mile of the Project Study Area, the closest of which is approximately 0.40 miles to the southwest. Due to the close proximity to several established activity centers, there is an exceedingly small chance of NSO nesting within the Project Study Area, though they may be found foraging in the vicinity. |
| *Athene cunicularia* Burrowing owl | SSC, BCC | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel. | **No Potential.** There is no open grassland or scrubland habitat within or adjacent to the Project Study Area. |
| *Dryobates nuttallii* Nuttall's woodpecker | BCC | Inhabits oak woodlands, wooded suburban areas and riparian corridors. Nests in cavities of primarily oaks, willows, cottonwoods, sycamores, or alders. | **Moderate Potential.** There are many suitable nesting trees with cavities within and adjacent to the Project Study Area. |
| *Selasphorus sasin* Allen's hummingbird | BCC | Resident to the coast of California and Oregon during the breeding season. Nests are constructed in trees or shrubs often near shady streams in both understory and tree canopy. | **Moderate Potential.** Suitable nesting habitat is present within and adjacent to the Project Study Area. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Baeolophus inornatus* Oak titmouse | BCC | Inhabit oak woodlands or oak-pine woodland. Nests in cavities high in trees (20 to 40 feet above the ground). | **Moderate Potential.** There are many suitable nesting trees within and adjacent to the Project Study Area. |
| *Chamaea fasciata* Wrentit | BCC | Year-round resident. Occurs in chaparral and coastal scrub along the coast, dense shrublands in arid regions. Nests in dense vegetation in a variety of shrub species. | **Low Potential.** Marginally suitable nesting shrubs are located within and adjacent to the Project Study Area. |
| *Geothlypis trichas sinuosa* Saltmarsh common yellowthroat | SSC, BCC | Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting. | **No Potential.** There is no marsh habitat within or adjacent to the Project Study Area. |
| *Setophaga petechia* Yellow warbler | SSC | Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration. | **No Potential.** There is no riparian woodland habitat within or adjacent to the Project Study Area. |
| *Agelaius tricolor* Tricolored blackbird | ST, SSC, BCC | Most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential. | **No Potential.** There is no aquatic habitat within or adjacent to the Project Study Area. |
| **Mammals** | | | |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Aplodontia rufa phaea* Point Reyes mountain beaver | SSC | Occurs only in western Marin County, almost entirely within Point Reyes National Sea shore. Found on moist, north-facing slopes within areas of coastal scrub. Lives in burrow systems and forages on a variety of herbaceous plants. | **No Potential.** There are no suitably densely vegetated and moist north-facing slopes within or adjacent to the Project Study Area. |
| *Zapus trinotatus orarius* Point Reyes jumping mouse | SSC | Bunch grass marshes on the uplands of Point Reyes in areas safe from continuous inundation. Eats mainly grass seeds with some insects and fruit taken. Builds grassy nests on ground under vegetation, burrows in winter. | **No Potential.** There is no marshy coastal meadow habitat within or near the Project Study Area. |
| *Antrozous pallidus* Pallid bat | SSC, WBWG High | Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roost must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | **No Potential.** There is no suitable day roosting habitat within or adjacent to the Project Study Area. |
| *Corynorhinus townsendii* Townsend's big-eared bat | SC, SSC, WBWG High | Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Extremely sensitive to human disturbance. | **No Potential.** There is no suitable day roosting habitat within or adjacent to the Project Study Area. Additionally, the project is located within a residential neighborhood with relatively constant human activity. |

| Scientific Name/ Common Name | Status[1] | Habitat | Potential for Occurrence |
|---|---|---|---|
| *Lasiurus cinereus* Hoary bat | WBWG Medium | Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water. | **No Potential.** There is no suitable day roosting habitat within or adjacent to the Project Study Area. |
| *Lasionycteris noctivagans* Silver-haired bat | WBWG Medium | Primarily a forest dweller, feeding over streams, ponds, and open brushy areas. Summer habitats include a variety of forest and woodland types, both coastal and montane. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark. | **No Potential.** There is no suitable day roosting habitat within or adjacent to the Project Study Area. |
| *Taxidea taxus* American Badger | SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents. | **No Potential.** There is no open grassland habitat with friable soils within or adjacent to the Project Study Area. |

[1] FE/SE – Federal/State Endangered FT/ST – Federal/State Threatened BCC – USFWS Bird of Conservation Concern
FC – Federal Candidate Species FP – Federal Proposed Species SC – State Candidate Species
WL – CDFW Watch List SSC – CDFW Species of Special Concern
WBWG – Western Bat Working Group – Medium or High Priority Species

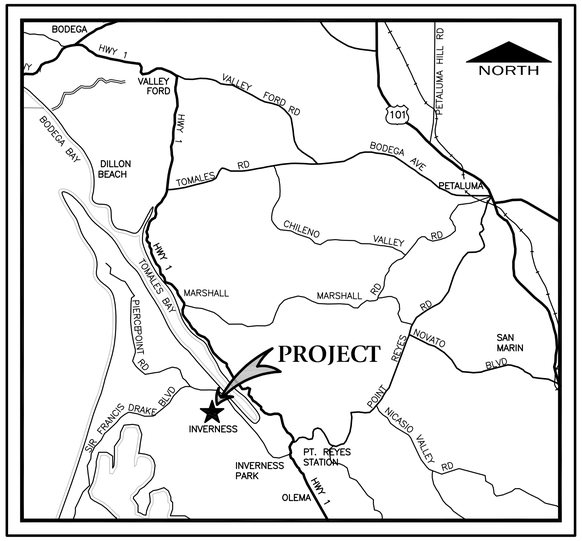
IMPROVEMENT PLANS

# INVERNESS TANK REPLACEMENT PROJECT

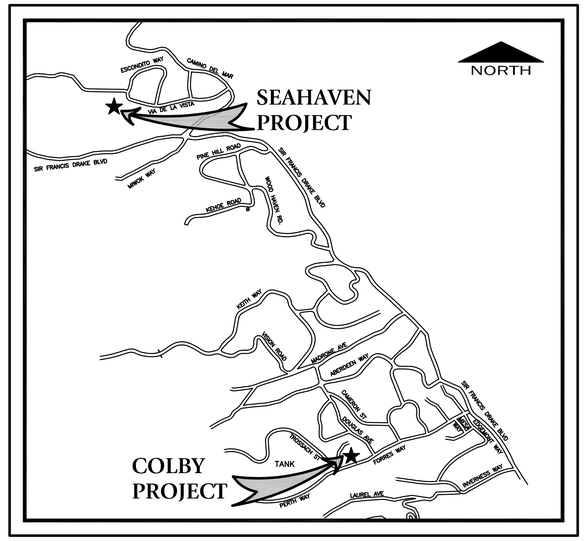
## COLBY TANK SITE & SEAHAVEN TANK SITE

## MARIN COUNTY - CALIFORNIA

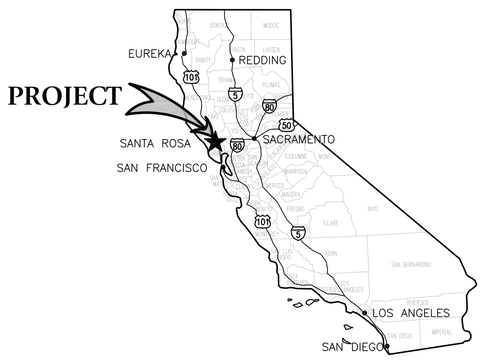
**OCTOBER 2024**




VICINITY MAP
NOT TO SCALE




LOCATION MAP
NOT TO SCALE




CALIFORNIA STATE MAP
NOT TO SCALE

## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| 1 | COVER |
| 2 | ABBREVIATIONS, LEGEND & NOTES |
| 3 | COLBY TANK SITE DEMOLITION PLAN |
| 4 | COLBY TANK SITE GRADING PLAN |
| 5 | COLBY TANK SITE PIPING PLAN |
| 6 | COLBY TANK APPURTENANCE PLAN |
| 7 | COLBY TANK SECTION |
| 8 | COLBY TANK EROSION CONTROL PLAN |
| 9 | SEAHAVEN TANK SITE DEMOLITION PLAN |
| 10 | SEAHAVEN TANK SITE GRADING PLAN |
| 11 | SEAHAVEN TANK SITE PIPING PLAN |
| 12 | SEAHAVEN TANK APPURTENANCE PLAN |
| 13 | SEAHAVEN TANK SECTION |
| 14 | SEAHAVEN TANK EROSION CONTROL PLAN |
| 15 | TANK DETAILS |
| 16 | TANK DETAILS |
| 17 | WATER SYSTEM DETAILS |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**PRELIMINARY**
FOR STUDY PURPOSES ONLY
DATE 10/23/24

IMPROVEMENT PLANS
INVERNESS TANK
REPLACEMENT PROJECT



TAB: 1 COVER

09-17-24 Patheal \2630\dwg\2630 07\2630.07 COVER.dwg

# LEGEND

## PIPING

### DESCRIPTION

| JOINTS | DOUBLE LINE | SINGLE LINE |
|---|---|---|
| BELL & SPIGOT | | |
| FLANGED | | |
| MECHANICAL | | |
| **VALVES** | | |
| BALL | | |
| CHECK | | |
| BUTTERFLY | | |
| GATE | | |
| PLUG | | |
| GLOBE | | |
| SAFETY | | |
| MANUAL | | |
| INLET CONTROL | | |
| **FITTINGS** | | |
| CROSS | | |
| ELBOW (REDUCING) | | |
| ELBOW (STRAIGHT) | | |
| FLANGED COUPLING ADAPTOR | | |
| FLEXIBLE COUPLING | | |
| REDUCER CONCENTRIC | | |
| TEE | | |

## MISCELLANEOUS

### DESCRIPTION

| | |
|---|---|
| CONCRETE IN SECTION | |
| EXISTING GRADE | |
| FINISH GRADE | |
| GRATING | |
| STEEL IN SECTION | |
| WATER SURFACE | |
| WOOD IN SECTION | |
| CLEANOUT | |
| DIRECTION OF FLOW | |
| HOSE BIBB | |
| MANHOLE | |
| STRUCTURAL STEEL ANGLE 6" LEG, 4" LEG, 5/8" THICK | *L 6 X 4 X 5/8* |
| STRUCTURAL STEEL CHANNEL 10" DEEP, 15.3 POUNDS/ LINEAR FOOT | *C 10 X 15.3* |
| STRUCTURAL STEEL WIDE FLANGE 6" DEEP, 12 POUNDS/ LINEAR FOOT | *W 6 X 12* |
| PLATE 1/2" THICK, 18" WIDE, 24" LONG | *PL 1/2 X 18 X 24* |

# DISTRIBUTION SYSTEM LEGEND

| LINES | |
|---|---|
| BOUNDARY | |
| PARCEL | |
| CENTER | |
| EASEMENT | |

| UTILITY LINES | EXISTING | PROPOSED |
|---|---|---|
| STORM DRAIN | 24" SD | 24" SD |
| WATER | 8"W | 8"W |
| SEWER | 12" SS | 12" SS |
| GAS | 3" G | |
| ELECTRICAL | E | |
| TELEPHONE | T | |
| TELEVISION | TV | |
| JOINT TRENCH | JT | |

| TOPOGRAPHY | |
|---|---|
| WATER METER | WM |
| WATER VALVE | |
| BLOWOFF | |
| FIRE HYDRANT | |
| GAS METER | GM |
| CATCH BASIN | |
| STORM DRAIN INLET | |
| STORM DRAIN MANHOLE | |
| SEWER MANHOLE | |
| SEWER CLEANOUT | |
| JOINT POLE | |
| LIGHT STANDARD | |
| GUY/ANCHOR | |
| CURB & GUTTER | |
| A.C. DIKE | |
| FENCE | |
| CHAIN LINK FENCE | |
| DITCH/SWALE | |
| MONUMENT | |
| TREE TO BE SAVED | |
| TREE TO BE REMOVED | |

# SYMBOLS

DETAIL REFERENCE — A / 13 — DETAIL; SHEET REFERENCE NUMBER

SECTION REFERENCE — 3 / 10 — SECTION NUMBER; SHEET REFERENCE NUMBER

# ABBREVIATIONS

| | |
|---|---|
| AB | AGGREGATE BASE |
| AC | ASPHALT CONCRETE |
| ACP | ASBESTOS CEMENT PIPE |
| ADPT | ADAPTER |
| AGG | AGGREGATE |
| ALUM | ALUMINUM |
| AP | ANGLE POINT |
| APN | ASSESSORS PARCEL NUMBER |
| APPROX | APPROXIMATE |
| ARV | AIR RELEASE VALVE |
| AVE | AVENUE |
| BC | BEGIN HORIZONTAL CURVE |
| BLDG | BUILDING |
| BLVD | BOULEVARD |
| BM | BENCHMARK |
| BO | BLOWOFF |
| BV | BUTTERFLY VALVE |
| BVC | BEGIN VERTICAL CURVE |
| BW | BOTTOM OF WALL |
| B&R | BRELJE & RACE |
| C | CENTERLINE |
| CAV | COMBINATION AIR & VACUUM RELEASE VALVE |
| CB | CATCH BASIN |
| CBC | CALIFORNIA BUILDING CODE |
| CHK | CHECK |
| CIPP | CAST-IN-PLACE PIPE |
| CL | CLASS |
| CLR | CLEAR |
| CMP | CORRUGATED METAL PIPE |
| CMPA | CORRUGATED METAL PIPE ARCH |
| CO | CLEANOUT |
| CONC | CONCRETE |
| COND | CONDUIT |
| COTG | CLEANOUT TO GRADE |
| CP | CONTROL POINT |
| CPLG | COUPLING |
| CR | CURB RETURN |
| CSP | CORRUGATED STEEL PIPE |
| CTR | CENTER |
| CY | CUBIC YARDS |
| C/C | CENTER TO CENTER |
| C&G | CURB AND GUTTER |
| DBL | DOUBLE |
| DCDC | DOUBLE CHECK DETECTOR CHECK |
| DDC | DOUBLE DETECTOR CHECK |
| DET | DETECTOR |
| DI | DROP INLET |
| DIA | DIAMETER |
| DIP | DUCTILE IRON PIPE |
| DR | DRIVE |
| DS | DOWNSTREAM |
| DWG | DRAWING |
| D/W | DRIVEWAY |
| E | EAST |
| EC | END HORIZONTAL CURVE |
| ECC | ECCENTRIC |
| EFFL | EFFLUENT (SEWER) |
| EG | EXISTING GROUND |
| EL | ELEVATION |
| ELEC | ELECTRICAL |
| ELL | ELBOW |
| EP | EDGE OF PAVEMENT |
| ESMT | EASEMENT |
| EVC | END VERTICAL CURVE |
| EW | EACH WAY |
| EX | EXISTING |
| EXIST | EXISTING |
| FC | FACE OF CURB |
| FCA | FLANGED COUPLING ADAPTER |
| FES | FLARED END SECTION |
| FF | FINISHED FLOOR |
| FG | FINISHED GRADE |
| FH | FIRE HYDRANT |
| F | FLOWLINE |
| FL | FLOWLINE |
| FLG | FLANGE |
| FLSO | FLOWLINE SIDE OPENING |
| FLEX | FLEXIBLE |
| FM | FORCE MAIN (PRESSURE) |
| FT | FEET |
| GALV | GALVANIZED |
| GB | GRADE BREAK |
| GIP | GALVANIZED IRON PIPE |
| GPM | GALLONS PER MINUTE |
| GRD | GROUND |
| GV | GATE VALVE |
| HB | HOSE BIBB |
| HB | HEADER BOARD |
| HDPE | HIGH DENSITY POLYETHYLENE |
| HP | HIGH POINT |
| HPG | HIGH PRESSURE GAS |
| HWY | HIGHWAY |
| ICV | IRRIGATION CONTROL VALVE |
| ID | INSIDE DIAMETER |
| INV | INVERT |
| IP | IRON PIPE |
| IPS | IRON PIPE SIZE |
| IRR | IRRIGATION |
| ISA | INTERNATIONAL SIGN ASSOCIATION |
| JP | JOINT POLE |
| JT | JOINT TRENCH |
| L | ARC LENGTH |
| L | LENGTH |
| LF | LINEAL FEET |
| LG | LIP OF GARAGE |
| LP | LOW POINT |
| LT | LEFT |
| MAX | MAXIMUM |
| MFR | MANUFACTURE |
| MG | MILLION GALLONS |
| MH | MANHOLE |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MJ | MECHANICAL JOINT |
| MSL | MEAN SEA LEVEL |
| N | NORTH |
| NO | NUMBER |
| NA | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NPT | NATIONAL PIPE THREAD |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |
| OZ | OUNCE |
| PA | PLANTER AREA |
| PC | POINT OF CURVATURE |
| PCC | POINT OF COMPOUND CURVATURE |
| PCC | PORTLAND CEMENT CONCRETE |
| PD | PLANTER DRAIN |
| PE | PLANE END |
| PG | PAD GRADE |
| PIV | POST INDICATOR VALVE |
| P | PROPERTY LINE |
| PN | PAVING NOTCH |
| POC | POINT ON CURVE |
| POS | PRIVATE OPEN SPACE |
| POT | POINT ON TANGENT |
| PP | POWER POLE |
| PRC | POINT OF REVERSE CURVATURE |
| PSI | POUND PER SQUARE INCH |
| PT | POINT OF TANGENCY |
| PUE | PUBLIC UTILITY EASEMENT |
| PVC | POLYVINYL CHLORIDE |
| PVI | POINT OF VERTICAL INTERSECTION |
| PVMT | PAVEMENT |
| PWE | PUBLIC WATER EASEMENT |
| R | RADIUS |
| RC | RELATIVE COMPACTION |
| RCB | REINFORCED CONCRETE BOX |
| RCP | REINFORCED CONCRETE PIPE |
| RD | ROAD |
| RD | ROOF DRAIN |
| RED | REDUCER |
| REF | REFERENCE |
| RPBP | REDUCED PRESSURE BACKFLOW PREVENTER |
| RT | RIGHT |
| RT | RING TIGHT |
| RW | RECLAIMED WATER |
| R/W | RIGHT OF WAY |
| S | SOUTH |
| S | SLOPE |
| SAD | SEE ARCHITECTURAL DRAWINGS |
| SCH | SCHEDULE |
| SD | STORM DRAIN |
| SDCB | STORM DRAIN CATCH BASIN |
| SDCO | STORM DRAIN CLEANOUT |
| SDDI | STORM DRAIN DROP INLET |
| SDE | STORM DRAIN EASEMENT |
| SDMH | STORM DRAIN MANHOLE |
| SE | SEWER EASEMENT |
| SF | SQUARE FEET |
| SOF | SLIP ON FLANGE |
| SO | SIDE OPENING (SD) |
| SPEC | SPECIFICATION |
| SS | STAINLESS STEEL |
| SS | SANITARY SEWER |
| SSCO | SANITARY SEWER CLEANOUT |
| SSMH | SANITARY SEWER MANHOLE |
| ST | STREET |
| STA | STATION |
| STD | STANDARD |
| SVC | SERVICE |
| SWE | SIDEWALK EASEMENT |
| SY | SQUARE YARDS |
| S/W | SIDEWALK |
| T | TANGENT |
| TAN | TANGENT |
| TB | TOP OF BOX |
| TC | TOP OF CURB |
| TCE | TEMPORARY CONSTRUCTION EASEMENT |
| TD | TOP OF DIKE |
| TEL | TELEPHONE |
| TEMP | TEMPORARY |
| TG | TOP OF GRATE |
| THD | THREADED |
| TW | TOP OF WALL |
| TYP | TYPICAL |
| UFFG | UNDER FLOOR FINISHED GRADE |
| UNO | UNLESS NOTED OTHERWISE |
| VC | VERTICAL CURVE |
| W | WEST |
| W | WATER |
| WM | WATER METER |
| WNF | WELD NECK FLANGE |
| WS | WATER SERVICE |
| WT | WEIGHT |
| WV | WATER VALVE |
| ° | DEGREES |
| ' | MINUTES |
| " | SECONDS |
| Δ | DELTA |
| & | AND |
| @ | AT |
| # | NUMBER |
| # | POUNDS |
| % | PERCENT |

# GENERAL NOTES

1. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
2. UNAUTHORIZED CHANGES AND USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER.
3. ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND STANDARD PLANS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION AND AWWA STANDARDS, CURRENT EDITION OF ALL DOCUMENTS UNLESS STATED OTHERWISE.
4. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO BEGINNING OF WORK. PROGRESS MEETINGS SHALL BE HELD WEEKLY. THE MEETINGS SHALL COVER: CURRENT PROGRESS, PLANNED ACTIVITIES ACTIVITIES FOR NEXT TWO WEEKS, CONTRACTOR SUBMITTALS, POTENTIAL BLOCKAGE OF PRIVATE DRIVEWAY, ANY ISSUES TO APPRISE RESIDENTS OF AND ITEMS IDENTIFIED BY THE DISTRICT.
5. WORK HOURS ARE LIMITED TO MONDAY THROUGH FRIDAY, 8:00 A.M. TO 6:00 P.M. WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE DISTRICT.
6. ANY DISCREPANCY DISCOVERED BY CONTRACTOR IN THESE PLANS OR ANY FIELD CONDITIONS DISCOVERED BY CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK PER THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DISTRICT REPRESENTATIVE AND OWNER IMMEDIATELY UPON DISCOVERY. NOTIFICATION SHALL BE VERBALLY INITIALLY AND FOLLOWED BY WRITTEN NOTIFICATION.
7. ITEMS SPECIFIED IN THE BID DOCUMENTS ARE APPROVED FOR USE BY THE INVERNESS PUBLIC UTILITY DISTRICT. ALL SUBSTITUTES OR ALTERATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
8. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING NOISE, ODORS, DUST AND DEBRIS TO MINIMIZE IMPACTS ON SURROUNDING PROPERTIES AND ROADWAYS. CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE THAT ALL CONSTRUCTION EQUIPMENT IS EQUIPPED WITH MANUFACTURERS APPROVED MUFFLER'S AND BAFFLES. FAILURE TO COMPLY MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER.

# UTILITY NOTES

1. NO GUARANTEE IS INTENDED THAT UNDERGROUND OBSTRUCTIONS, NOT SHOWN ON THESE PLANS, WILL NOT BE ENCOUNTERED. THOSE SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE AND THE CONTRACTOR IS CAUTIONED TO THE OWNER, THE ENGINEER, AND THE INVERNESS PUBLIC UTILITY DISTRICT ASSUME NO RESPONSIBILITY FOR ANY OBSTRUCTIONS EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES WORKING WITHIN THE LIMITS OF THIS PROJECT.
2. CONTRACTOR SHALL NOT BEGIN EXCAVATION UNTIL ALL EXISTING UTILITIES HAVE BEEN MARKED IN THE FIELD BY THE APPLICABLE ENTITY RESPONSIBLE FOR THAT PARTICULAR UTILITY. THE CONTRACTOR SHALL NOTIFY EACH APPLICABLE ENTITY AT LEAST 24 HOURS BEFORE STARTING WORK. HAND DIGGING IS REQUIRED IF TRENCH IS WITHIN 12" OF ANY EXISTING UTILITY.
3. UNDERGROUND SERVICE ALERT: CALL TOLL FREE (800) 642-2444 AT LEAST 48 HOURS PRIOR TO EXCAVATION.
4. THE CONTRACTOR SHALL OBTAIN A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY BEFORE EXCAVATION OF TRENCHES. A COPY OF THE PERMIT MUST BE ON FILE WITH THE DISTRICT BEFORE TRENCH EXCAVATION MAY BEGIN.
5. CONTRACTOR SHALL UNCOVER EXISTING BURIED UTILITIES WITH UTILITY OWNER TO VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES. BURIED UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER MAINS AND LATERALS, DRAINS, ELECTRICAL LINES, AND TELEPHONE LINES. ALL UTILITIES CONFLICTING WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BEFORE THE START OF CONSTRUCTION.
6. THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE PROJECT AND/OR DESIGN ENGINEER MAY ADJUST THE GRADE OF NEW UNDERGROUND FACILITY CONSTRUCTION ACCORDINGLY WITH CONCURRENCE FROM THE DISTRICT ENGINEER.
7. ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED AND APPROVED PRIOR TO FINAL SURFACING.
8. MINIMUM DEPTH OF COVER FROM FINISHED GRADE SHALL BE: 32" FOR 6" MAINS.
9. A NO. 10 INSULATED COPPER WIRE SHALL BE LAID ON TOP OF AND ALONG ENTIRE LENGTH OF ALL MAINS AND SHALL BE EXTENDED TO THE SURFACE AT ALL VALVES, BLOWOFFS AND METER BOX LOCATIONS SUFFICIENTLY FOR LOCATOR EQUIPMENT TO BE ATTACHED. FASTEN THE WIRE TO THE TOP OF THE PIPE SO AS NOT TO BE DISPLACED BY BACKFILLING PROCEDURE (ONE METHOD OF ACCOMPLISHING THIS IS TO AFFIX THE WIRE TO THE TOP OF THE PIPE WITH DUCT TAPE AT APPROXIMATELY 10 FEET INTERVALS).

# ENVIRONMENTAL NOTES

1. IN THE EVENT THAT PREHISTORIC-ERA OR HISTORIC-ERA SITE INDICATORS ARE UNEARTHED DURING THE COURSE OF GRADING EXCAVATION AND/OR TRENCHING, ALL GROUND DISTURBING WORK IN THE VICINITY OF THE DISCOVERY SHALL CEASE AND ALL EXPOSED MATERIALS SHALL BE LEFT IN PLACE. PREHISTORIC-ERA ARCHAEOLOGIC SITE INDICATORS COULD INCLUDE CHIPPED CHERT AND OBSIDIAN TOOLS AND TOOL MANUFACTURE WASTE FLAKES, GRINDING IMPLEMENTS SUCH AS MOTORS AND PESTLES, AND LOCALLY DARKENED SOIL CONTAINING THE PREVIOUSLY MENTIONED ITEMS AS WELL AS FIRE ALTERED STONE AND DIETARY DEBRIS SUCH AS BONE AND SHELLFISH FRAGMENTS. HISTORIC-ERA ARCHAEOLOGIC SITE INDICATORS COULD INCLUDE ITEMS OF CERAMIC, GLASS AND METAL, AND FEATURES SUCH AS STRUCTURAL RUINS, WELLS AND PITS CONTAINING SUCH ARTIFACTS. AFTER CESSATION OF ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE DISTRICT. THE DISTRICT SHALL CONTACT THE APPROPRIATE AFFILIATED TRIBE(S), STATE WATER BOARDS AND A QUALIFIED PROFESSIONAL ARCHAEOLOGIST IMMEDIATELY AFTER THE FIND. SUCH ARCHAEOLOGIST, IN CONJUNCTION WITH TRIBAL REPRESENTATIVES, SHALL CONDUCT AN EVALUATION OF SIGNIFICANCE OF THE SITE, AND ASSES THE NECESSITY FOR MITIGATION. THE CONTRACTOR SHALL NOT RESUME CONSTRUCTION ACTIVITIES IN THE AFFECTED AREA UNTIL AUTHORIZATION TO PROCEED IS RECEIVED FROM THE DISTRICT.
2. IN THE EVENT PALEONTOLOGICAL SITE INDICATORS ARE UNEARTHED DURING THE COURSE OF GRADING EXCAVATION AND/OR TRENCHING, ALL GROUND DISTURBING WORK IN THE VICINITY OF THE DISCOVERY SHALL CEASE AND AL EXPOSED MATERIALS SHALL BE LEFT IN PLACE. AFTER CESSATION OF EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE DISTRICT. THE DISTRICT SHALL CONTACT A QUALIFIED PROFESSIONAL GEOLOGIST OR PALEONTOLOGIST IMMEDIATELY AFTER THE FIND. SUCH CONSULTANT SHALL CONDUCT AN EVALUATION OF SIGNIFICANCE OF THE SITE, AND ASSESS THE NECESSITY FOR MITIGATION. THE CONTRACTOR SHALL NOT RESUME CONSTRUCTION ACTIVITIES UNTIL AUTHORIZATION TO PROCEED IS RECEIVED FROM THE DISTRICT.
3. IF HUMAN REMAINS ARE ENCOUNTERED DURING GRADING EXCAVATION AND/OR TRENCHING, ALL GROUND DISTURBING WORK IN THE VICINITY OF THE DISCOVERY SHALL CEASE AND THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE DISTRICT AND THE MARIN COUNTY CORONER'S OFFICE. IF THE REMAINS ARE DETERMINED BY THE CORONER'S OFFICE TO BE OF NATIVE AMERICAN ORIGIN, THE NATIVE AMERICAN HERITAGE COMMISSION SHALL BE CONTACTED AND THE PROCEDURES OUTLINED IN CCR TITLE 14, CHAPTER 3 (CEQA) §15064.5 (D) AND (E) SHALL BE IMPLEMENTED BY THE DISTRICT OR ITS DESIGNEE.
4. THE CONTRACTOR SHALL FOLLOW THE PROVISIONS OF SECTIONS 5163 THROUGH 5167 OF THE GENERAL INDUSTRY SAFETY ORDERS (CALIFORNIA CODE OF REGULATIONS, TITLE 8) TO PROTECT THE PROJECT AREA FROM BEING CONTAMINATED BY THE ACCIDENTAL RELEASE OF ANY HAZARDOUS MATERIALS. IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL HALT CONSTRUCTION IMMEDIATELY, NOTIFY THE OWNER'S ONSITE REPRESENTATIVE, AND IMPLEMENT REMEDIATION IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE BAY AREA REGIONAL WATER QUALITY CONTROL BOARD. DISPOSAL OF ALL HAZARDOUS MATERIALS SHALL BE IN COMPLIANCE WITH CURRENT CALIFORNIA HAZARDOUS WASTE DISPOSAL LAWS.

# DUST CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE DUST CONTROL MEASURES FOR THE ENTIRE CONSTRUCTION PERIOD OF THIS PROJECT TO THE SATISFACTION OF THE DISTRICT ENGINEER.
2. CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED IN PROPER WORKING ORDER AND SHALL NOT BE ALLOWED TO IDLE FOR A PERIOD OF LONGER THAN 30 MINUTES.
3. TO MINIMIZE FUGITIVE DUST AND THE RELEASE OF PM10, THE CONTRACTOR SHALL IMPLEMENT A DUST CONTROL PROGRAM. DUST CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   A. ACTIVE CONSTRUCTION SITE SHALL BE WATERED AS NEEDED, PREFERABLE IN THE LATE MORNING AND WHEN WORK HAS CEASED FOR THE DAY.
   B. STOCKPILES OF LOOSE MATERIAL SHALL BE COVERED AT ALL TIMES, EXCEPT WHEN THIS WOULD INTERFERE WITH IMMEDIATE CONSTRUCTION ACTIVITIES.
   C. ALL CLEARING, GRADING, EARTH MOVING OR EXCAVATION ACTIVITIES SHALL CEASE WHEN THE AVERAGE WIND SPEED FOR ONE HOUR EXCEEDS 20 MILES PER HOUR (MPH).
   D. THE AREA DISTURBED BY EXCAVATION OR GRADING SHALL BE KEPT TO THE MINIMUM REQUIRED TO IMPLEMENT THE PROJECT.
   E. WHEN TRAVELING ON EXPOSED SOILS, CONSTRUCTION SITE VEHICLE SPEED SHALL BE LIMITED TO 15 MPH.
   F. HAUL VEHICLES SHALL BE COVERED WHEN NOT ACTIVELY ENGAGED IN SITE CONSTRUCTION ACTIVITY.
   G. STREETS SHALL BE SWEPT REGULARLY AND KEPT FREE OF DIRT AND DEBRIS.
4. ANY PROJECT RELATED DEBRIS, DEBRIS AND WASTE SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL STATUES ANDREGULATIONS.

# EROSION CONTROL NOTES

1. EROSION CONTROL MEASURES SHALL BE INSTALLED AND IN PLACE BETWEEN OCTOBER 1 AND APRIL 30. INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTANT MAINTENANCE OF EROSION CONTROL MEASURES. SITE EROSION CONTROL SHALL BE INSPECTED BY THE CONTRACTOR AND CLEANED IF NECESSARY AFTER EVERY MAJOR STORM.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP OF MUD AND DEBRIS CARRIED ONTO SURROUNDING STREETS TO THE SATISFACTION OF THE DISTRICT ENGINEER.
4. ALL GRADED AREAS AND EXPOSED SOIL WITHIN THIS PROJECT SHALL BE SEEDED FOR EROSION CONTROL BY THE CONTRACTOR. SEED AND MULCH WILL BE APPLIED BY OCTOBER 1ST TO ALL CUT AND FILL SLOPES. SEED AND FERTILIZER WILL BE APPLIED HYDRAULICALLY OR BY HAND AT THE RATES SPECIFIED BELOW. ON SLOPES, STRAW WILL BE APPLIED BY BLOWER OR BY HAND AND ANCHORED IN PLACE BY PUNCHING.
5. HYDROSEEDING MIX SHALL CONFORM TO THE FOLLOWING:

| ITEM | POUNDS PER ACRE |
|---|---|
| "BLANDO BROME" | 30 |
| ANNUAL RYE GRASS | 20 |
| FERTILIZER (16-20-0 & 15% SULFUR) | 500 |
| STRAW MULCH | 4000 OR 3500 LB. OF WOOD CELLULOSE |

# BASIS OF BEARINGS AND REFERENCES

BASIS OF BEARINGS:

COLBY TANK: N55°E (ASSUMED) BETWEEN CONTROL POINTS 1 AND 2.

SEAHAVEN TANK: CALIFORNIA COORDINATE SYSTEM, ZONE 3 (NAD 83). BEING S01°29'33"W BETWEEN CONTROL POINTS 9 AND 10.

REFERENCES:

| | | | |
|---|---|---|---|
| R1 | R/S 2018-163 M.C.R. | R4 | EASEMENT 90-04707 M.C.R |
| R2 | 35 R/S 98 M.C.R. | R5 | EASEMENT 81-09671 M.C.R. |
| R3 | 4 R/M 52 M.C.R. | R6 | EASEMENT 85-047428 M.C.R. |

THE BOUNDARY LINES DEPICTED HEREIN ARE DERIVED FROM RECORD DATA, BASED ON THE AFOREMENTIONED REFERENCES, AND HAVE BEEN DELINEATED ACCORDINGLY USING EXISTING FOUND MONUMENTS OF RECORD.

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JEFFREY D. ROACH PLS 9158


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REGISTERED PROFESSIONAL ENGINEER — BRENT LEE BEARDS — No. C 60683 — Exp. 12-31-26 — CIVIL — STATE OF CALIFORNIA

INVERNESS PUBLIC UTILITY DISTRICT

# INVERNESS TANK REPLACEMENT PROJECT

INVERNESS PUBLIC UTILITY DISTRICT

MARIN COUNTY, CALIFORNIA

**PRELIMINARY**
FOR STUDY PURPOSES ONLY
DATE 10-25-24

| REVISIONS | | |
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| NO. | DATE | DESCRIPTION |
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ON A FULL-SCALE DRAWING, LENGTH OF BAR BELOW IS 1-INCH. IF BAR MEASURES LESS THAN 1-INCH, THIS SHEET WAS PLOTTED AT A REDUCED SCALE, WHICH MAY REQUIRE ADJUSTMENT OF SCALE(S) SHOWN ON DRAWING.

| PROJECT | DATE |
|---|---|
| 2630.07 | OCTOBER 2024 |
| DRAWN BY | CHECKED BY |
| JLP | BB |

# ABBREVIATIONS, LEGEND & NOTES

SHEET NO.
2 OF 17

## DEMOLITION/INTERIM FACILITIES NOTES

1. STRIP SITE OF GRASS AND ORGANIC MATERIAL WITHIN LIMITS OF GRADING (SEE GRADING PLAN, SHEET 4 FOR LIMITS). STRIPPINGS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF OFFSITE.
2. REMOVE EXISTING CONCRETE FOUNDATION STRIPS AND PROPERLY DISPOSE OF OFFSITE.
3. REMOVE EXISTING SHED AND PROPERLY DISPOSE OF OFFSITE.

**AFTER WORK IN ABOVE SHEET NOTES ( 1 , 2 AND 3 ) IS COMPLETE, PERFORM THE FOLLOWING WORK.**

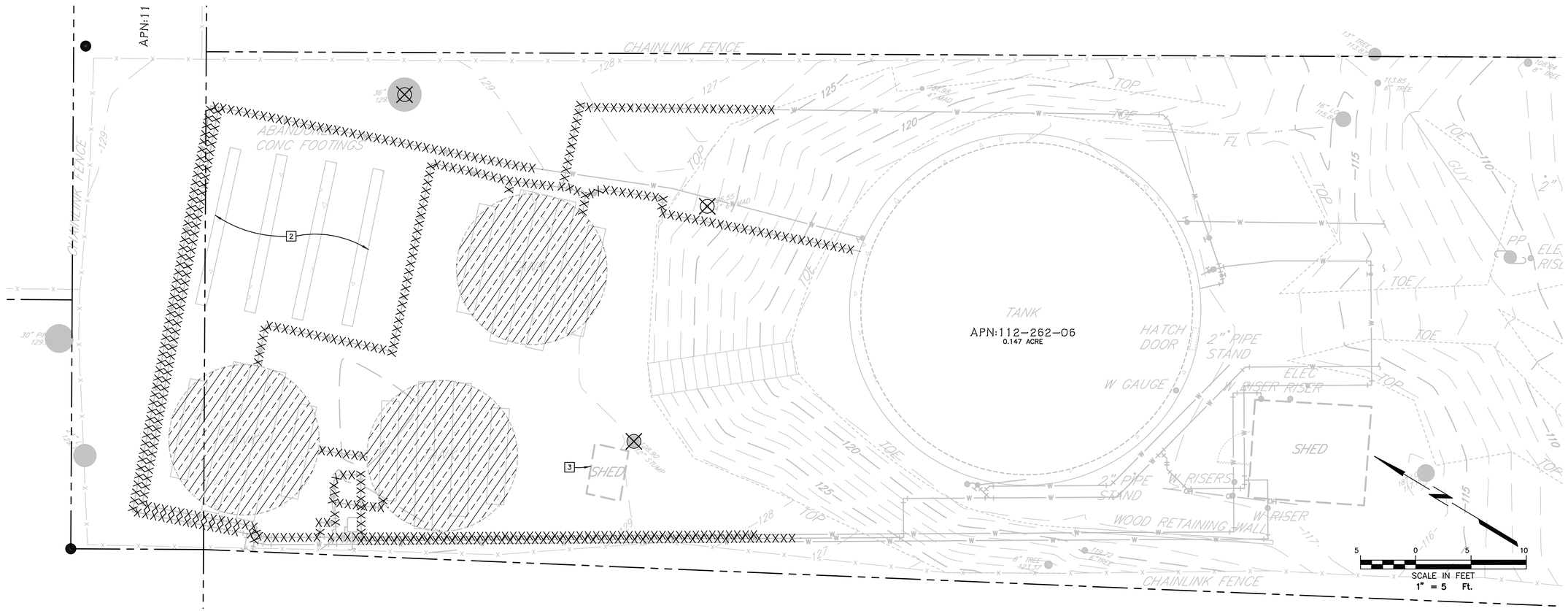
**AFTER WORK IN ABOVE SHEET NOTES ( X THRU X ) IS COMPLETE, PERFORM THE FOLLOWING WORK.**

## LEGEND

XXXXX — UTILITY PIPES AND STRUCTURES TO BE REMOVED AND PROPERLY DISPOSED OF OFFSITE. CUT AND CAP PORTIONS OF THE UTILITIES TO REMAIN. REFER TO SPECIFICATIONS FOR ABANDONMENT REQUIREMENTS. SEE PLAN FOR SIZE AND TYPE.

REMOVE ALL EXISTING SURFACE IMPROVEMENTS, INCLUDING, BUT NOT LIMITED TO CONCRETE SLABS, TANK FOOTING TANK PLATFORMS AND TANKS, ETC WITHIN THE LIMITS OF THE HATCHING SHOWN HEREON AND PROPERLY DISPOSE OF OFFSITE, UNLESS OTHERWISE NOTED. REDWOOD LUMBER SHALL BE STACKED AT THE _____ TANK SITE WITH 1/4" STICKERS BETWEEN EACH ROW.

TREE OR STUMP TO BE REMOVED.





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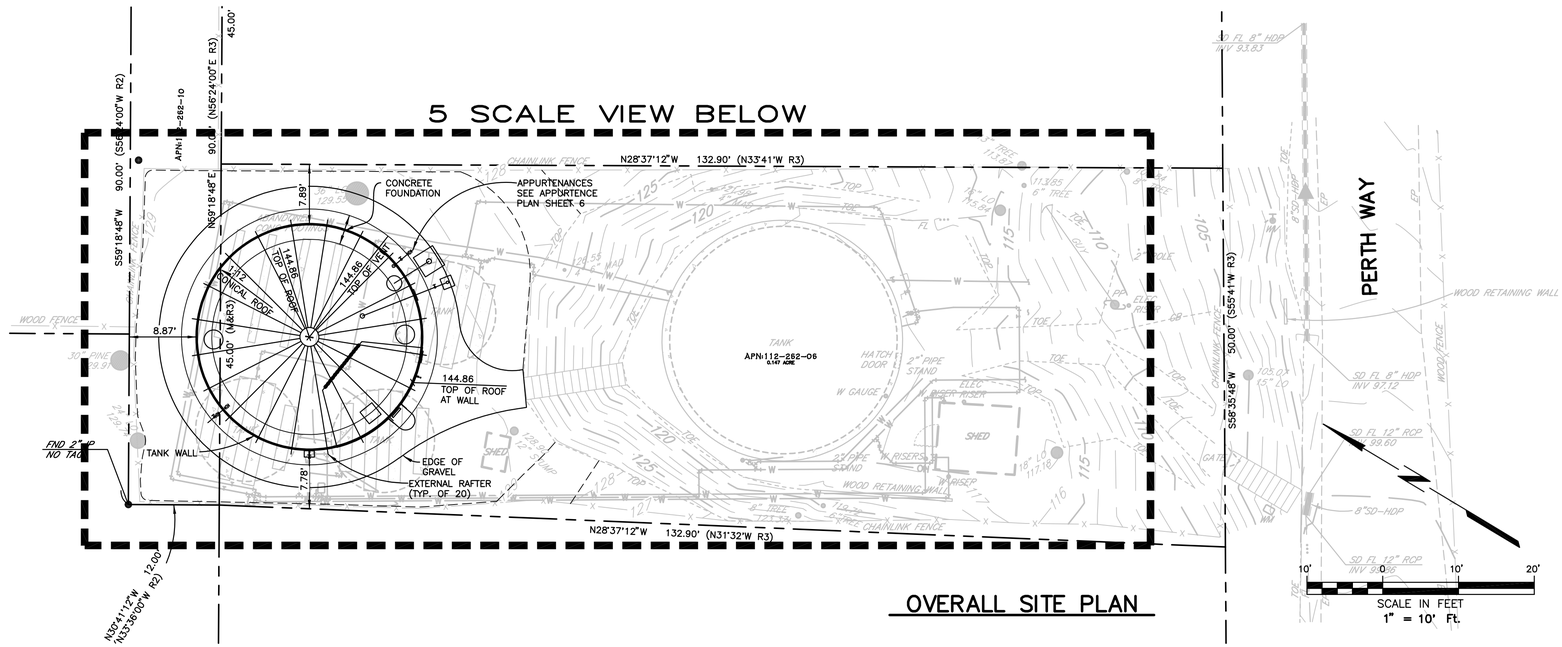
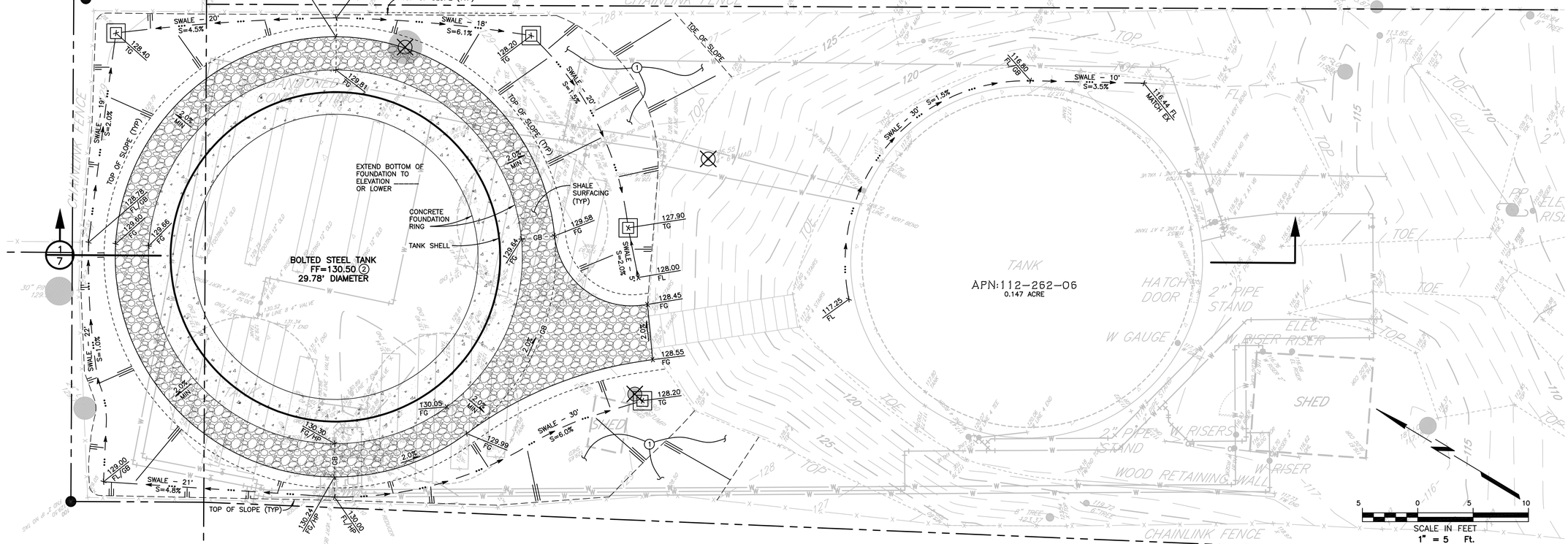
# COLBY TANK SITE DEMOLITION PLAN

SHEET NO.
3 OF 17

10-23-24 beazor \2630\dwg\2630 07\2630.07 BASE – Colby Tank.dwg TAB: 3 COLBY TANK SITE DEMO




## GRADING NOTES

**(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)**

1. BERM AS REQUIRED TO CONTAIN DRAINAGE 0.5' MINIMUM ABOVE FLOWLINE OF SWALE TO AVOID REMOVAL OF SPOILS FROM THE SITE.
2. FINISH FLOOR (FF) OF TANK MAY BE RAISED UP TO 131.00 TO HELP ELIMINATE THE NEED TO OFF HAUL SPOILS FROM THE SITE.

## SITE SURFACING STRUCTURAL SECTION

| LOCATION | CL2 AB** |
|---|---|
| SITE SURFACING | 0.5' |

** SCARIFY AND RECOMPACT UPPER 6" OF SUB GRADE TO 95% RELATIVE COMPACTION. CL2 AB COMPACTED TO 95% RELATIVE COMPACTION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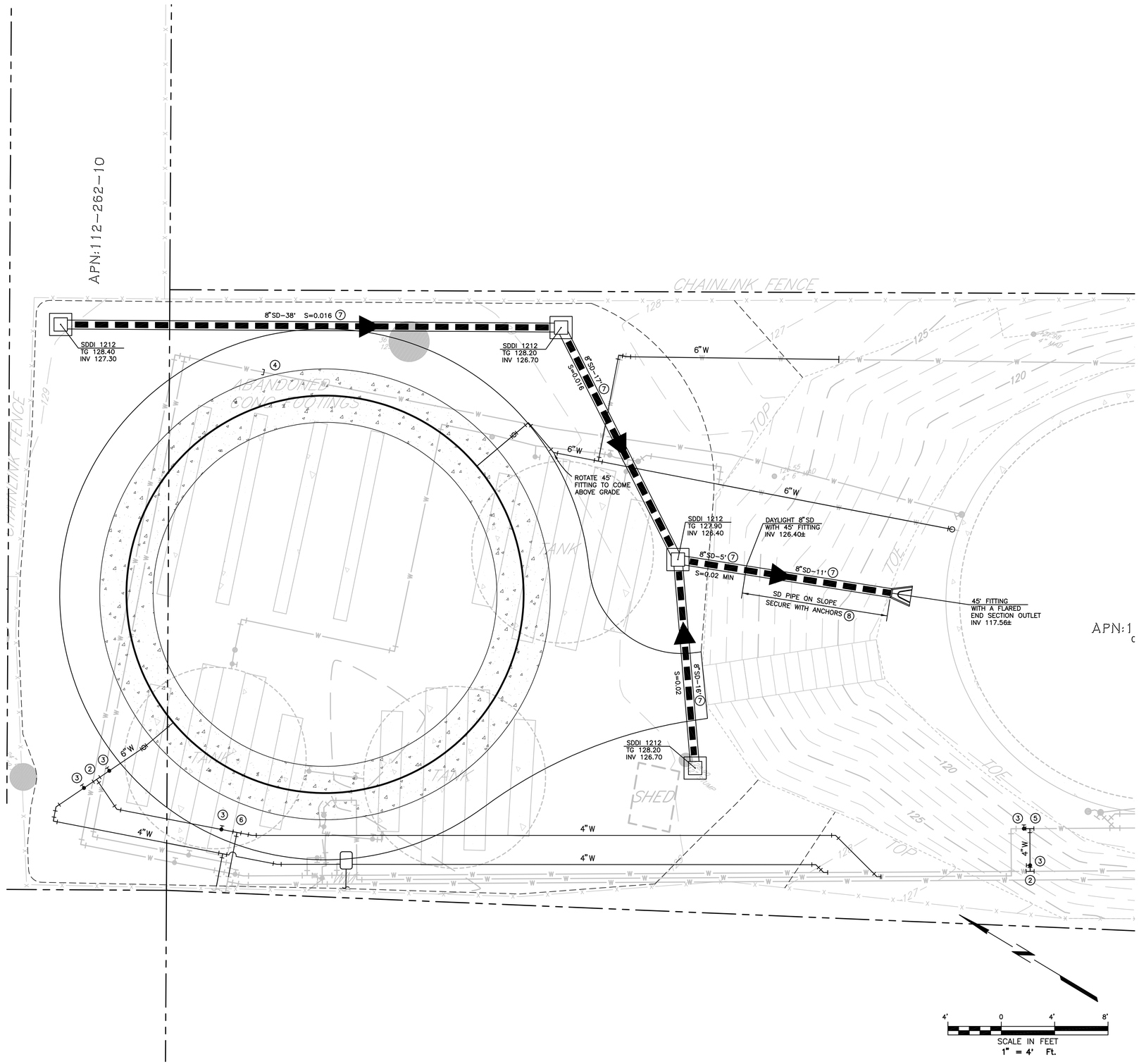
## COLBY TANK SITE GRADING PLAN

SHEET NO.
4 OF 17

10-23-24 beazor \2630\dwg\2630 07\2630.07 BASE – Colby Tank.dwg TAB: 4 COLBY TANK SITE GRAD




## LEGEND

**(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)**

1. HARNESS TIE BACK.
2. 4" TEE, FLG X MJ x MJ.
3. 4" GATE VALVE, MJ X FLG.
4. 3" PLUG, MJ.
5. 4" TEE, MJ x FLG x MJ.
6. 4" TEE, FLG x FLG x MJ.
7. ADS N-12 DUAL WALL HDPE PIPE OR APPROVED EQUAL.
8. ANCHOR PIPE TO SLOPE PER CALTRANS STANDARD PLAN D87B.
9. PIPING NOTE 9.
10. PIPING NOTE 10.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# INVERNESS TANK REPLACEMENT PROJECT

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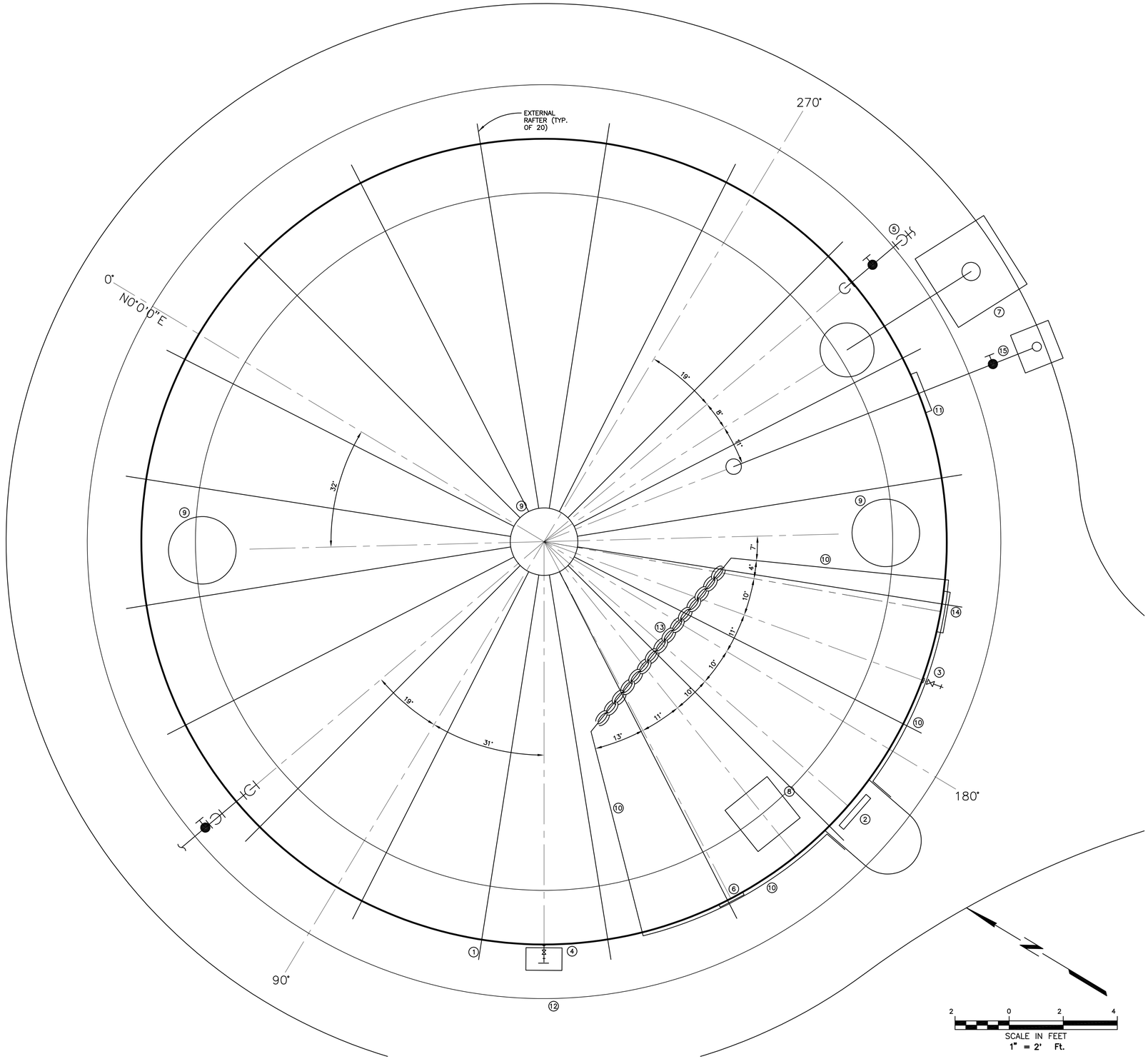
## COLBY TANK SITE PIPING PLAN

SHEET NO.
**5** OF **17**

10-23-24 bezzer \2630\dwg\2630 07\2630.07 BASE – Colby Tank.dwg TAB: 5 COLBY TANK SITE PIPING




## UTILITY NOTES

**(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)**

1. INLET PIPE — IP / 15
2. ACCESS LADDER — AL / 16
3. SAMPLE TAP — ST / 16
4. LEVEL TRANSMITTER — LT / 16
5. OUTLET PIPE — OP / 15
6. SHELL MANWAY — SM / 15
7. INTERIOR OVERFLOW — IO / 15
8. ROOF HATCH — RH / 16
9. ROOF VENT — RV / 16
10. GUARDRAIL — AL / 16
11. 42"X24" FLUSH CLEANOUT — -- / 15
12. TANK FOUNDATION — TF / 15
13. SAFETY CHAIN — -- / 16
14. LEVEL INDICATOR — LI / 15
15. TANK DRAIN — TD / 16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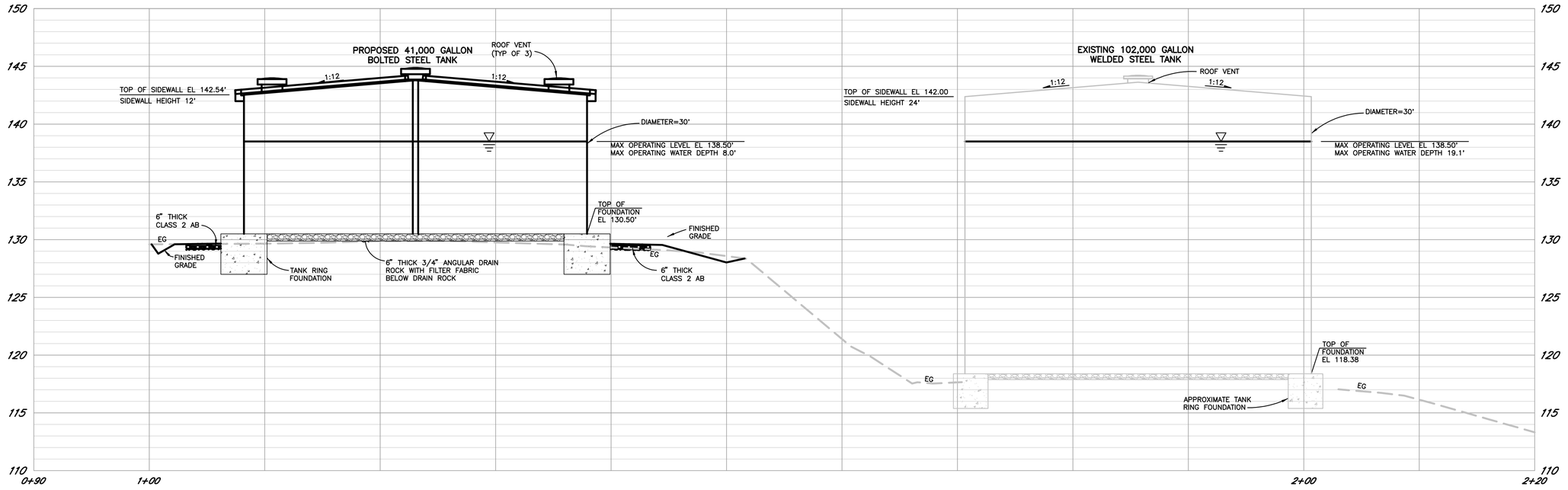
# COLBY TANK APPURTENANCE PLAN

SHEET NO.
**6** OF **17**

10-23-24 bezsor \2630\dwg\2630 07\2630.07 BASE – Colby Tank.dwg TAB: 6 COLBY TANK APPURT




## SECTION

SCALE: HORZ. 1" =5'
VERT. 1" =5'

1/4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## COLBY TANK SITE SECTION

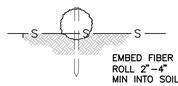
SHEET NO.
7 OF 17

10-23-24 Cody-Prentice \2630\dwg\2630 07\2630.07 SECTION-Tank.dwg TAB: 7 Colby Sect

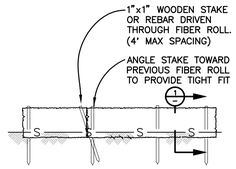
## LEGEND

—— S —— SILT FENCE, PER DETAIL THIS SHEET

—— FR —— FIBER ROLL, PER DETAIL THIS SHEET




SECTION 1




### NOTES

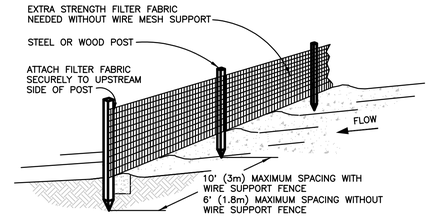
1. THE FIBER ROLLS SHALL BE PLACED ON SLOPE CONTOUR.
2. FIBER ROLLS TO BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING. USE STRAW, ROCKS, OR FILTER FABRIC TO FILL GAPS BETWEEN THE FIBER ROLLS AND TAMP THE BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND FIBER ROLLS.

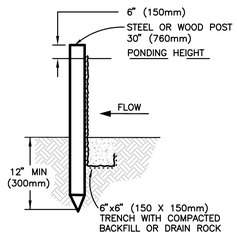
## FIBER ROLL DETAIL

NOT TO SCALE

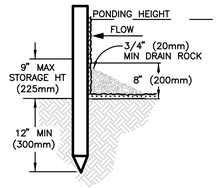
### NOTES

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.




TRENCH DETAIL




INSTALLATION WITHOUT TRENCHING

## SILT FENCE

NOT TO SCALE

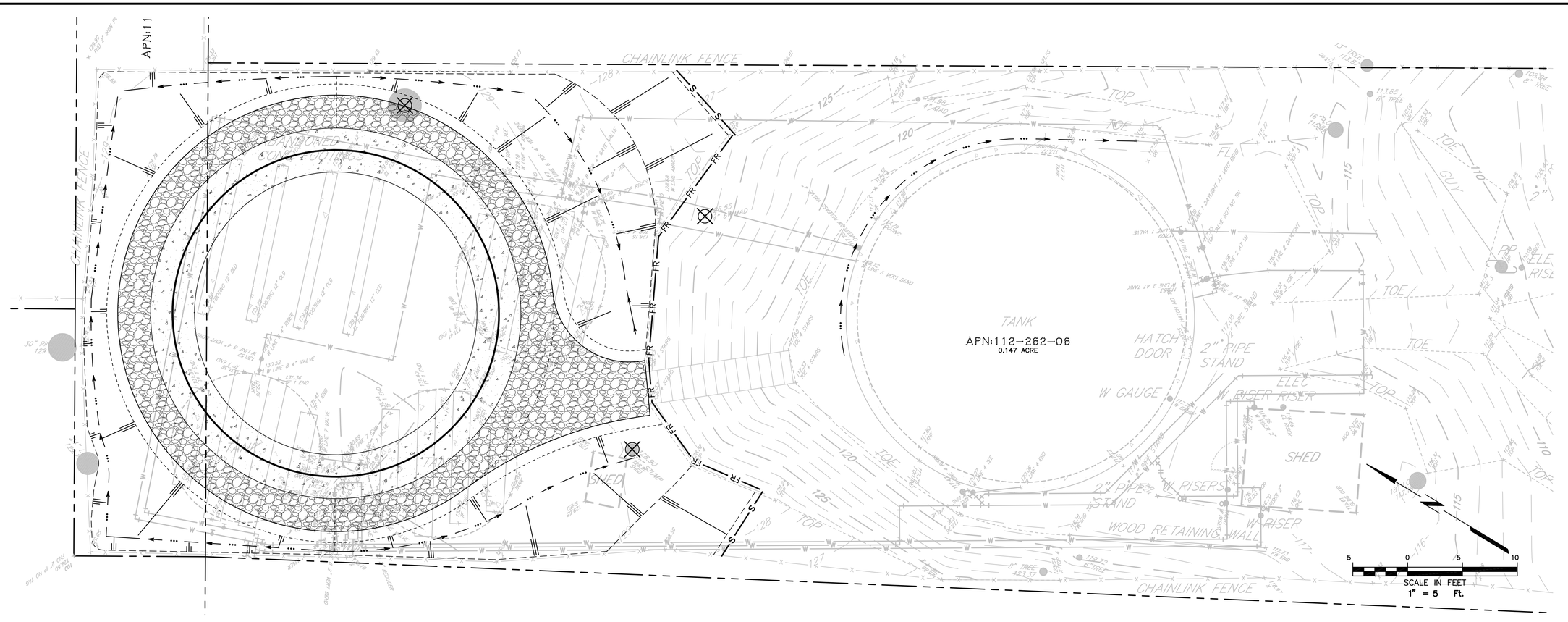
## GENERAL NOTES

1. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE, APPLICABLE MARIN COUNTY REGULATIONS, AND SECTION 20 OF THE CALTRANS STANDARD SPECIFICATIONS.
2. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE.
3. CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS. CHANGES SHALL BE NOTED ON THE PLAN WHEN MADE.
4. EXPOSED SLOPES SHALL BE PROTECTED BY USING EROSION PREVENTION MEASURES TO THE MAXIMUM EXTENT PRACTICABLE, SUCH AS ESTABLISHING 70% VEGETATION COVERAGE, HYDROSEEDING, STRAW MULCH, GEOTEXTILES, PLASTIC COVERS, BLANKETS OR MATS.
5. HYDROSEEDING SHALL BE CONDUCTED IN A THREE STEP PROCESS. FIRST, EVENLY APPLY SEED MIX AND FERTILIZER TO THE EXPOSED SLOPE. SECOND, EVENLY APPLY MULCH OVER THE SEED AND FERTILIZER. THIRD, STABILIZE THE MULCH IN PLACE.

   APPLICATIONS SHALL BE BROADCASTED MECHANICALLY OR MANUALLY AT THE RATES SPECIFIED BELOW. SEED MIX AND FERTILIZER SHALL BE WORKED INTO THE SOIL BY ROLLING OR TAMPING. IF STRAW IS USED AS MULCH, STRAW SHALL BE DERIVED FROM WHEAT, RICE OR BARLEY AND BE APPROXIMATELY 6 TO 8 INCHES IN LENGTH. STABILIZATION OF MULCH SHALL BE DONE HYDRAULICALLY BY APPLYING AN EMULSION OR MECHANICALLY BY CRIMPING OR PUNCHING THE MULCH INTO THE SOIL. EQUIVALENT METHODS AND MATERIALS MAY BE USED ONLY IF THE ADEQUATELY PROMOTE VEGETATION GROWTH AND PROTECT EXPOSED SLOPES.

| MATERIALS | APPLICATION RATE (POUNDS PER ACRE) |
|---|---|
| SEED MIX | |
| BROMUS MOLLIS (BLANDO BROME) | 40 |
| TRIFOLIUM HIRTUM (HYKON ROSE CLOVER) | 20 |
| FERTILIZER | |
| 16–20–0 & 15% SULPHUR | 500 |
| MULCH | |
| STRAW | 4000 |
| HYDRAULIC STABILIZING (NON–ASPHALTIC, DERIVED FROM PLANTS) M–BINDER OR SENTINEL | 75–100 |
| EQUIVALENT MATERIAL | PER MANUFACTURER |

6. SOIL AND MATERIAL STOCKPILE SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.
7. SOLID WASTE, SUCH AS TRASH, DISCARDED BUILDING MATERIALS AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY, OR AS NECESSARY, AND REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE ARRANGED.
8. A CONCRETE WASHOUT AREA, SUCH AS A TEMPORARY PIT, SHALL BE DESIGNATED TO CLEAN CONCRETE TRUCKS AND TOOLS. AT NO TIME SHALL CONCRETE PRODUCTS AND WASTE BE ALLOWED TO ENTER COUNTY WATERWAYS SUCH AS CREEKS OR STORM DRAINS.
9. PROPER APPLICATION, CLEANING AND STORAGE OR POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.
10. WHEN UTILIZED, TEMPORARY BATHROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED TO PREVENT THE DISCHARGE OF POLLUTANTS.
11. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.





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INVERNESS PUBLIC UTILITY DISTRICT

# INVERNESS TANK REPLACEMENT PROJECT

## INVERNESS PUBLIC UTILITY DISTRICT

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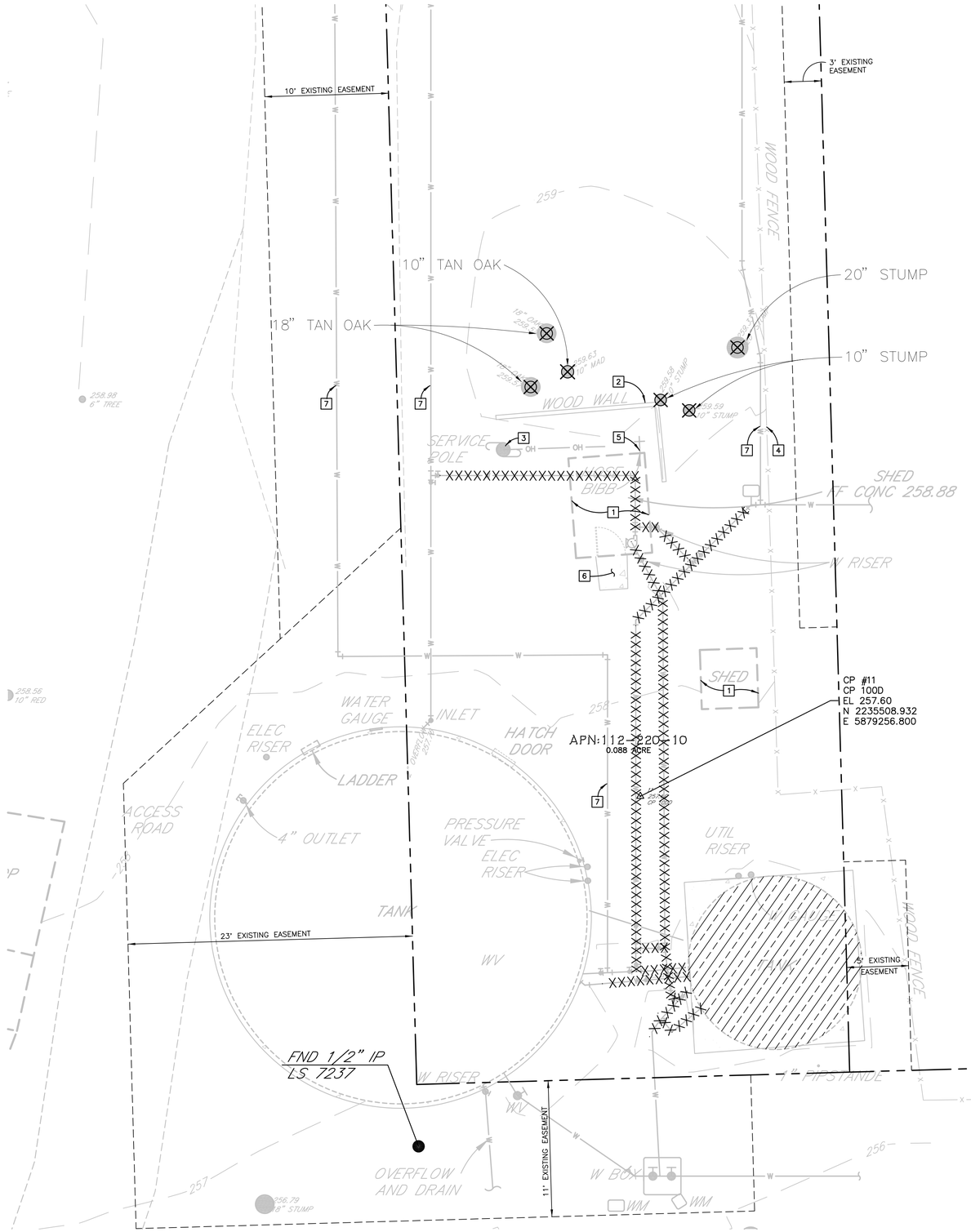
## COLBY TANK EROSION CONTROL PLAN

SHEET NO.

**8** OF **17**

10–23–24 beazor \2630\dwg\2630 07\2630.07 BASE – Colby Tank.dwg TAB: 8 COLBY TANK SITE EROS




## DEMOLITION/INTERIM FACILITIES NOTES

1. REMOVE EXISTING SHED AND CONCRETE FOUNDATION, AND PROPERLY DISPOSE OF OFFSITE.
2. REMOVE EXISTING WOOD WALL AND FOOTINGS AND PROPERLY DISPOSE OF OFFSITE.
3. EXISTING SERVICE POLE TO BE RELOCATED BY OTHERS. SEE ELECTRICAL PLAN.
4. EXISTING FENCE TO REMAIN PROTECT IN PLACE.
5. REMOVE HOSE BIBB AND ASSOCIATED PIPING AND PROPERLY DISPOSE OF OFFSITE.
6. REMOVE EXISTING CONCRETE SLAB AND PROPERLY DISPOSE OF OFFSITE.
7. EXISTING WATERLINE TO REMAIN, PROTECT IN PLACE.

**AFTER WORK IN ABOVE SHEET NOTES ( X THRU X ) IS COMPLETE, PERFORM THE FOLLOWING WORK.**

## LEGEND

XXXXX — UTILITY PIPES AND STRUCTURES TO BE REMOVED AND PROPERLY DISPOSED OF OFFSITE. CUT AND CAP PORTIONS OF THE UTILITIES TO REMAIN. REFER TO SPECIFICATIONS FOR ABANDONMENT REQUIREMENTS. SEE PLAN FOR SIZE AND TYPE.

REMOVE ALL EXISTING SURFACE IMPROVEMENTS, INCLUDING, BUT NOT LIMITED TO CONCRETE SLABS, TANK FOOTING TANK PLATFORMS AND TANKS, ETC WITHIN THE LIMITS OF THE HATCHING SHOWN HEREON AND PROPERLY DISPOSE OF OFFSITE, UNLESS OTHERWISE NOTED. REDWOOD LUMBER SHALL BE STACKED AT THE _____ TANK SITE WITH 1/4" STICKERS BETWEEN EACH ROW.

TREE TO BE REMOVED.

## NOTES

1. PROPERTY LINES AND EASEMENTS SHOWN ARE APPROXIMATE IN LENGTH, LOCATION AND DIRECTION.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INVERNESS PUBLIC UTILITY DISTRICT

# INVERNESS TANK REPLACEMENT PROJECT

## INVERNESS PUBLIC UTILITY DISTRICT

MARIN COUNTY, CALIFORNIA

**PRELIMINARY**
**FOR STUDY PURPOSES ONLY**
DATE 10/23/24

| REVISIONS | | |
|---|---|---|
| NO. | DATE | DESCRIPTION |
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ON A FULL-SCALE DRAWING, LENGTH OF BAR BELOW IS 1-INCH. IF BAR MEASURES LESS THAN 1-INCH, THIS SHEET WAS PLOTTED AT A REDUCED SCALE, WHICH MAY REQUIRE ADJUSTMENT OF SCALE(S) SHOWN ON DRAWING.

| PROJECT | DATE |
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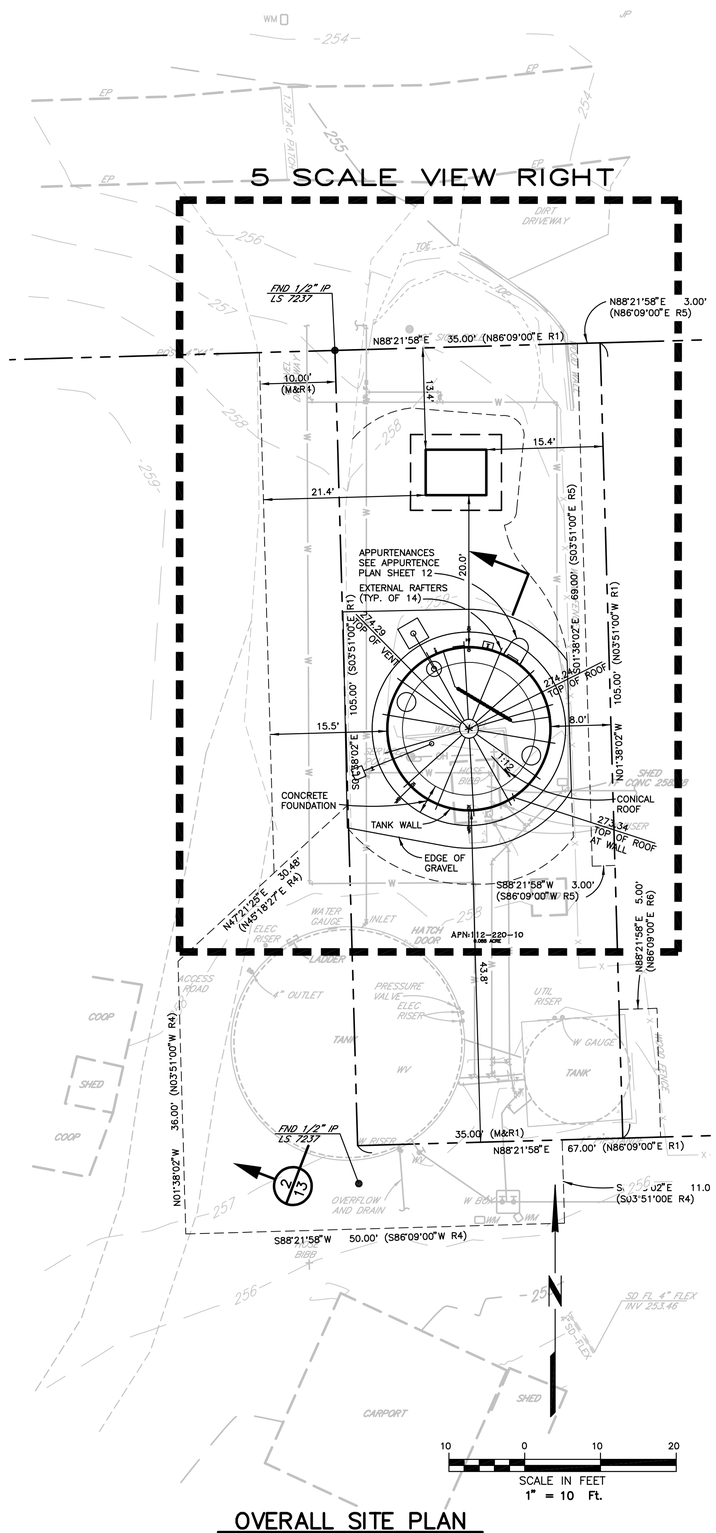
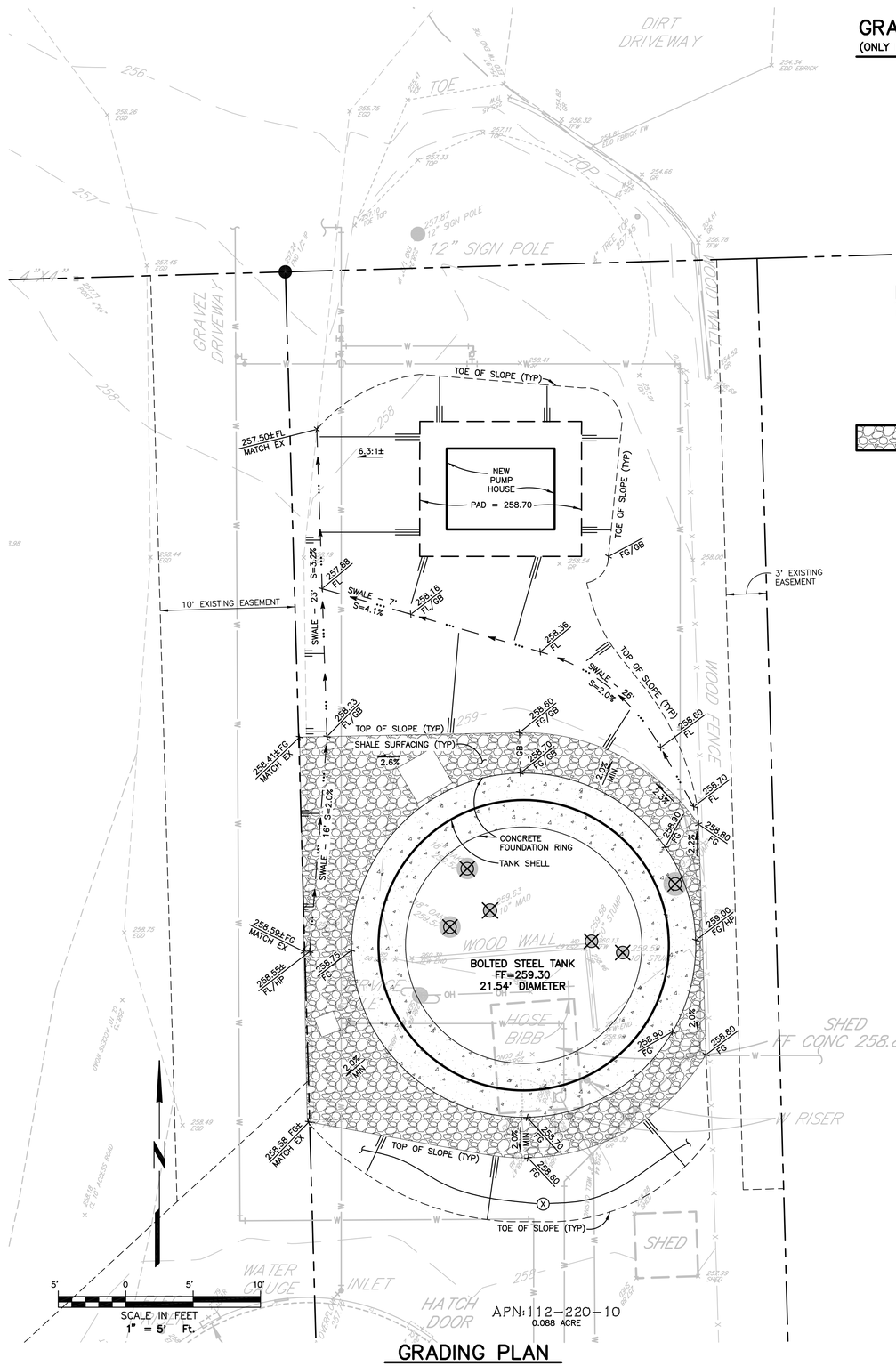
## SEAHAVEN TANK SITE DEMOLITION PLAN

SHEET NO.
**9** OF **17**

10-23-24 bezzor \2630\dwg\2630 07\2630.07 BASE - Seahaven Tank.dwg TAB: 9 S-HAVEN TANK SITE DEMO




OVERALL SITE PLAN




GRADING PLAN

## GRADING NOTES
(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

## NOTES
1. PROPERTY LINES AND EASEMENTS SHOWN ARE APPROXIMATE IN LENGTH, LOCATION AND DIRECTION.

## SITE SURFACING STRUCTURAL SECTION

| LOCATION | CL2 AB** |
|---|---|
| SITE SURFACING | 0.5' |

** SCARIFY AND RECOMPACT UPPER 6" OF SUB GRADE TO 95% RELATIVE COMPACTION. CL2 AB COMPACTED TO 95% RELATIVE COMPACTION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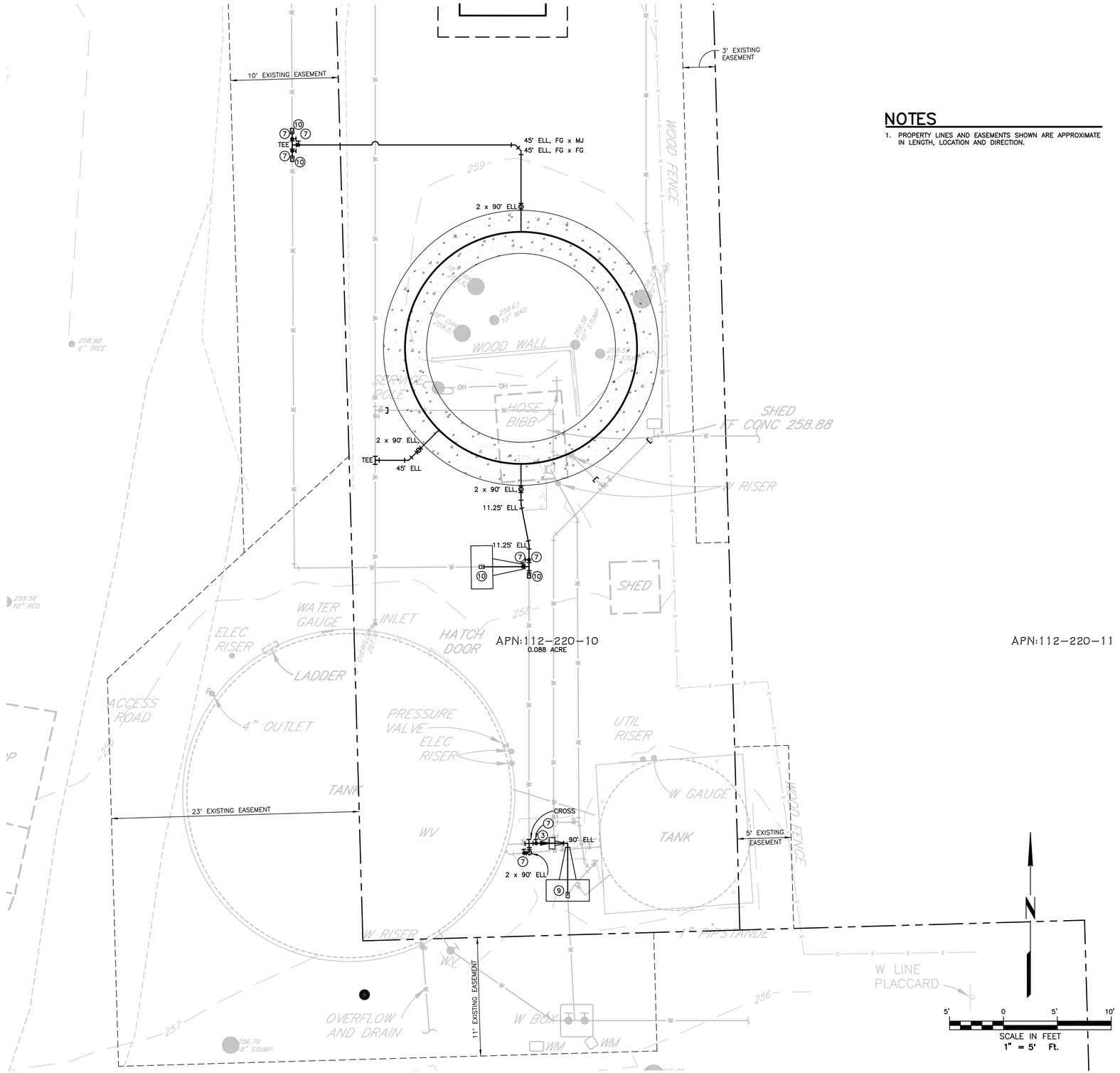
## SEAHAVEN TANK SITE GRADING PLAN

SHEET NO.
**10** OF **17**

10-23-24 beazor \2630\dwg\2630 07\2630.07 BASE - Seahaven Tank.dwg TAB: 10 S-HAVEN TANK SITE GRAD




## NOTES

1. PROPERTY LINES AND EASEMENTS SHOWN ARE APPROXIMATE IN LENGTH, LOCATION AND DIRECTION.

## LEGEND

(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)

1. MJ PLUG WITH 2" TAP
2. 3" x 4" REDUCER, FLG x MJ
3. 4" x 6" REDUCER, MJ x FLG
4. 2" GATE VALVE
5. 3" GATE VALVE
6. 4" GATE VALVE
7. 6" GATE VALVE
8. 2" SLEEVE MJ OR WIDE RANGE FLEXIBLE COUPLING
9. 4" SLEEVE MJ OR WIDE RANGE FLEXIBLE COUPLING
10. 6" SLEEVE MJ OR WIDE RANGE FLEXIBLE COUPLING
11. 2" PRESSURE REDUCING VALVE
12. 
13. PIPING NOTE 13.
14. PIPING NOTE 14.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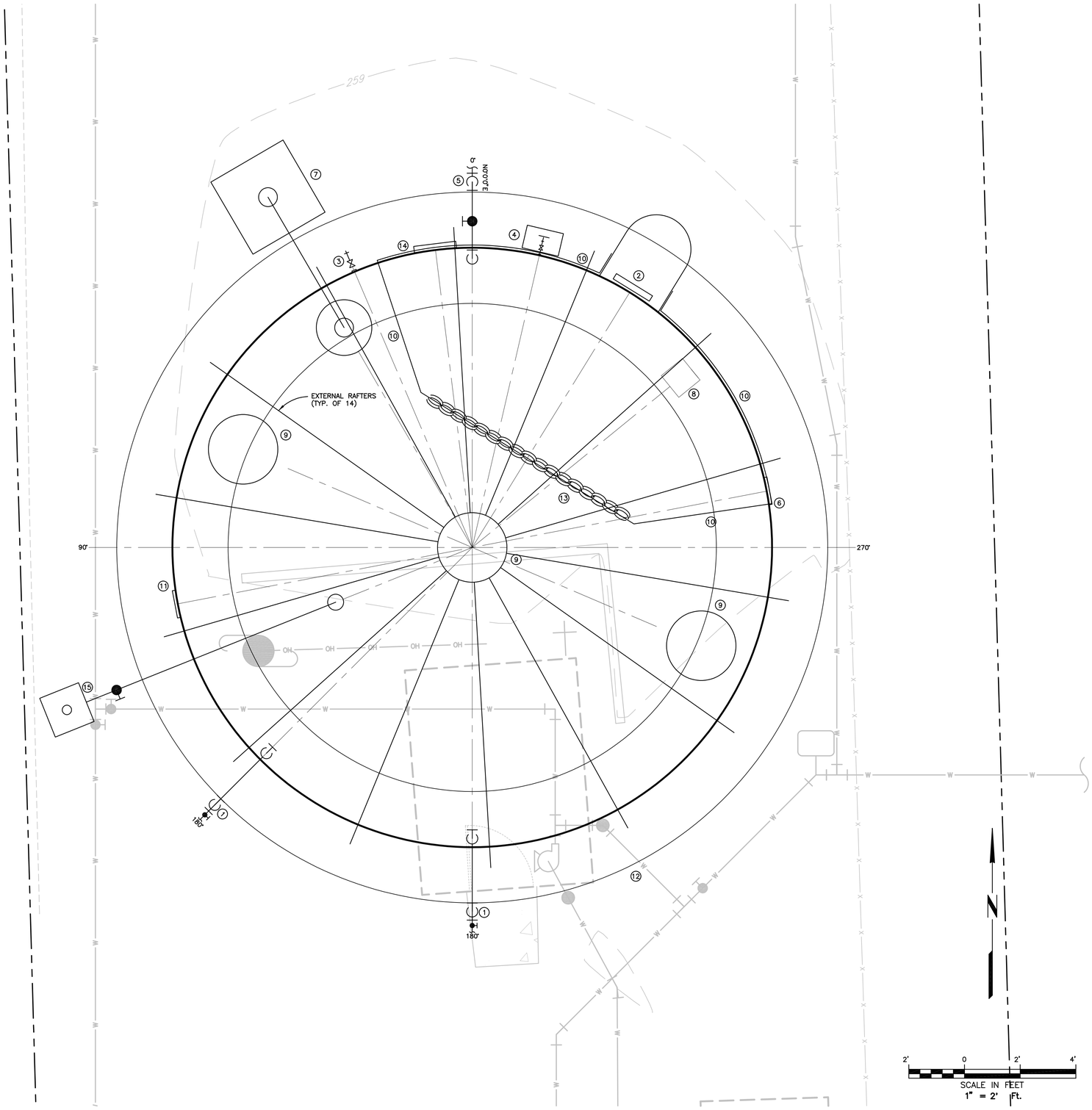
## SEAHAVEN TANK SITE PIPING PLAN

SHEET NO.
**11** OF **17**

10-23-24 bezzor \2630\dwg\2630 07\2630.07 BASE - Seahaven Tank.dwg TAB: 11 S-HAVEN TANK SITE PIPING




## UTILITY NOTES

**(ONLY NOTES RELEVANT TO THIS SHEET ARE SHOWN)**

1. INLET PIPE — IP 15
2. ACCESS LADDER — AL 16
3. SAMPLE TAP — ST 16
4. LEVEL TRANSMITTER — LT 16
5. OUTLET PIPE — OP 15
6. SHELL MANWAY — SM 15
7. INTERIOR OVERFLOW — IO 15
8. ROOF HATCH — RH 16
9. ROOF VENT — RV 16
10. GUARDRAIL — AL 16
11. 42"X24" FLUSH CLEANOUT
12. TANK FOUNDATION — TF 15
13. SAFETY CHAIN — — 16
14. LEVEL INDICATOR — LI 15
15. TANK DRAIN — TD 16

## NOTES

1. PROPERTY LINES AND EASEMENTS SHOWN ARE APPROXIMATE IN LENGTH, LOCATION AND DIRECTION.

N

2' 0 2' 4'

SCALE IN FEET
1" = 2' Ft.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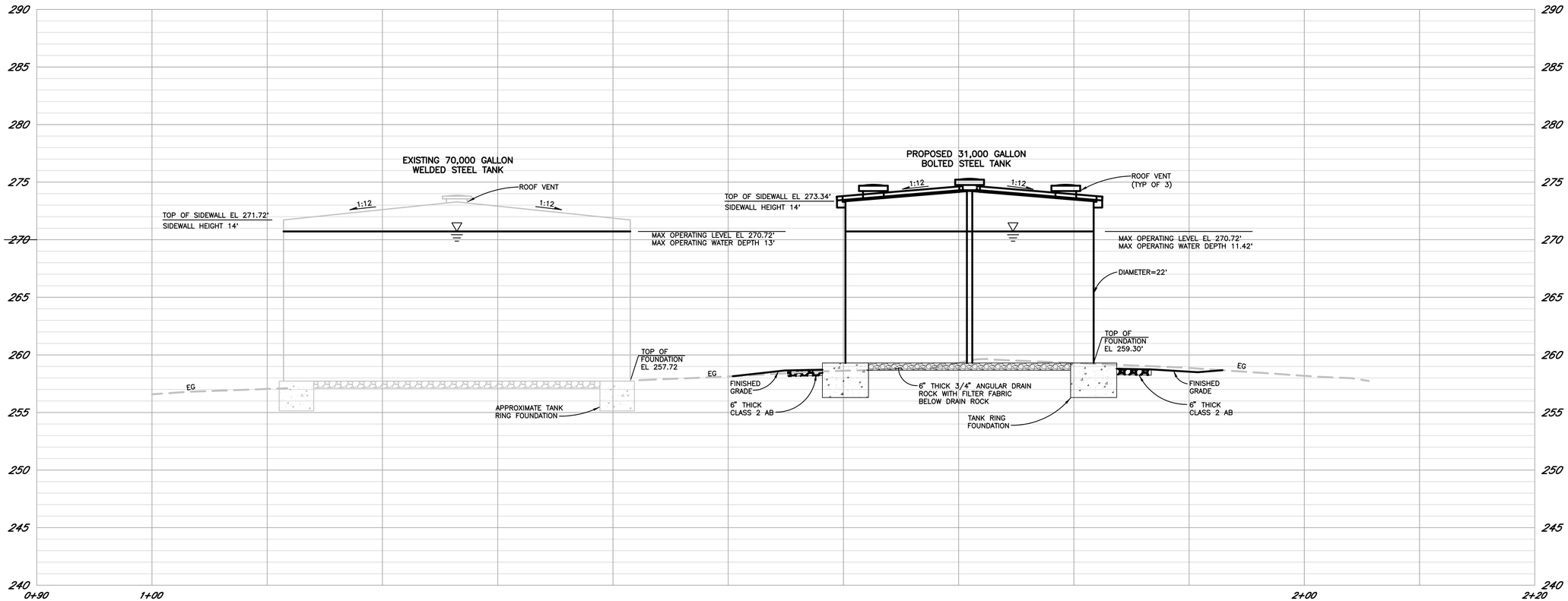
## SEAHAVEN TANK APPURTENANCE PLAN

SHEET NO.
12 OF 17

10-23-24 bezzar \2630\dwg\2630 07\2630.07 BASE - Seahaven Tank.dwg TAB: 12 S-HAVEN TANK APPURT




## SECTION

SCALE: HORZ. 1" =5'
VERT. 1" =5'

2/10

10-23-24 Cody-Prentice \2630\dwg\2630 07\2630.07 SECTION-Tank.dwg TAB: 13 Seahaven Sect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## SEAHAVEN TANK SITE SECTION

SHEET NO.
13 OF 17

# GENERAL NOTES

1. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE, APPLICABLE MARIN COUNTY REGULATIONS, AND SECTION 20 OF THE CALTRANS STANDARD SPECIFICATIONS.
2. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE.
3. CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS. CHANGES SHALL BE NOTED ON THE PLAN WHEN MADE.
4. EXPOSED SLOPES SHALL BE PROTECTED BY USING EROSION PREVENTION MEASURES TO THE MAXIMUM EXTENT PRACTICABLE, SUCH AS ESTABLISHING 70% VEGETATION COVERAGE, HYDROSEEDING, STRAW MULCH, GEOTEXTILES, PLASTIC COVERS, BLANKETS OR MATS.
5. HYDROSEEDING SHALL BE CONDUCTED IN A THREE STEP PROCESS. FIRST, EVENLY APPLY SEED MIX AND FERTILIZER TO THE EXPOSED SLOPE. SECOND, EVENLY APPLY MULCH OVER THE SEED AND FERTILIZER. THIRD, STABILIZE THE MULCH IN PLACE.

   APPLICATIONS SHALL BE BROADCASTED MECHANICALLY OR MANUALLY AT THE RATES SPECIFIED BELOW. SEED MIX AND FERTILIZER SHALL BE WORKED INTO THE SOIL BY ROLLING OR TAMPING. IF STRAW IS USED AS MULCH, STRAW SHALL BE DERIVED FROM WHEAT, RICE OR BARLEY AND BE APPROXIMATELY 6 TO 8 INCHES IN LENGTH. STABILIZATION OF MULCH SHALL BE DONE HYDRAULICALLY BY APPLYING AN EMULSION OR MECHANICALLY BY CRIMPING OR PUNCHING THE MULCH INTO THE SOIL. EQUIVALENT METHODS AND MATERIALS MAY BE USED ONLY IF THE ADEQUATELY PROMOTE VEGETATION GROWTH AND PROTECT EXPOSED SLOPES.

| MATERIALS | APPLICATION RATE (POUNDS PER ACRE) |
|---|---|
| SEED MIX | |
| BROMUS MOLLIS (BLANDO BROME) | 40 |
| TRIFOLIUM HIRTUM (HYKON ROSE CLOVER) | 20 |
| FERTILIZER | |
| 16–20–0 & 15% SULPHUR | 500 |
| MULCH | |
| STRAW | 4000 |
| HYDRAULIC STABILIZING (NON–ASPHALTIC, DERIVED FROM PLANTS) | |
| M–BINDER OR SENTINEL | 75–100 |
| EQUIVALENT MATERIAL | PER MANUFACTURER |

6. SOIL AND MATERIAL STOCKPILE SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.
7. SOLID WASTE, SUCH AS TRASH, DISCARDED BUILDING MATERIALS AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY, OR AS NECESSARY, AND REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE ARRANGED.
8. A CONCRETE WASHOUT AREA, SUCH AS A TEMPORARY PIT, SHALL BE DESIGNATED TO CLEAN CONCRETE TRUCKS AND TOOLS. AT NO TIME SHALL CONCRETE PRODUCTS AND WASTE BE ALLOWED TO ENTER COUNTY WATERWAYS SUCH AS CREEKS OR STORM DRAINS.
9. PROPER APPLICATION, CLEANING AND STORAGE OR POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.
10. WHEN UTILIZED, TEMPORARY BATHROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED TO PREVENT THE DISCHARGE OF POLLUTANTS.
11. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.

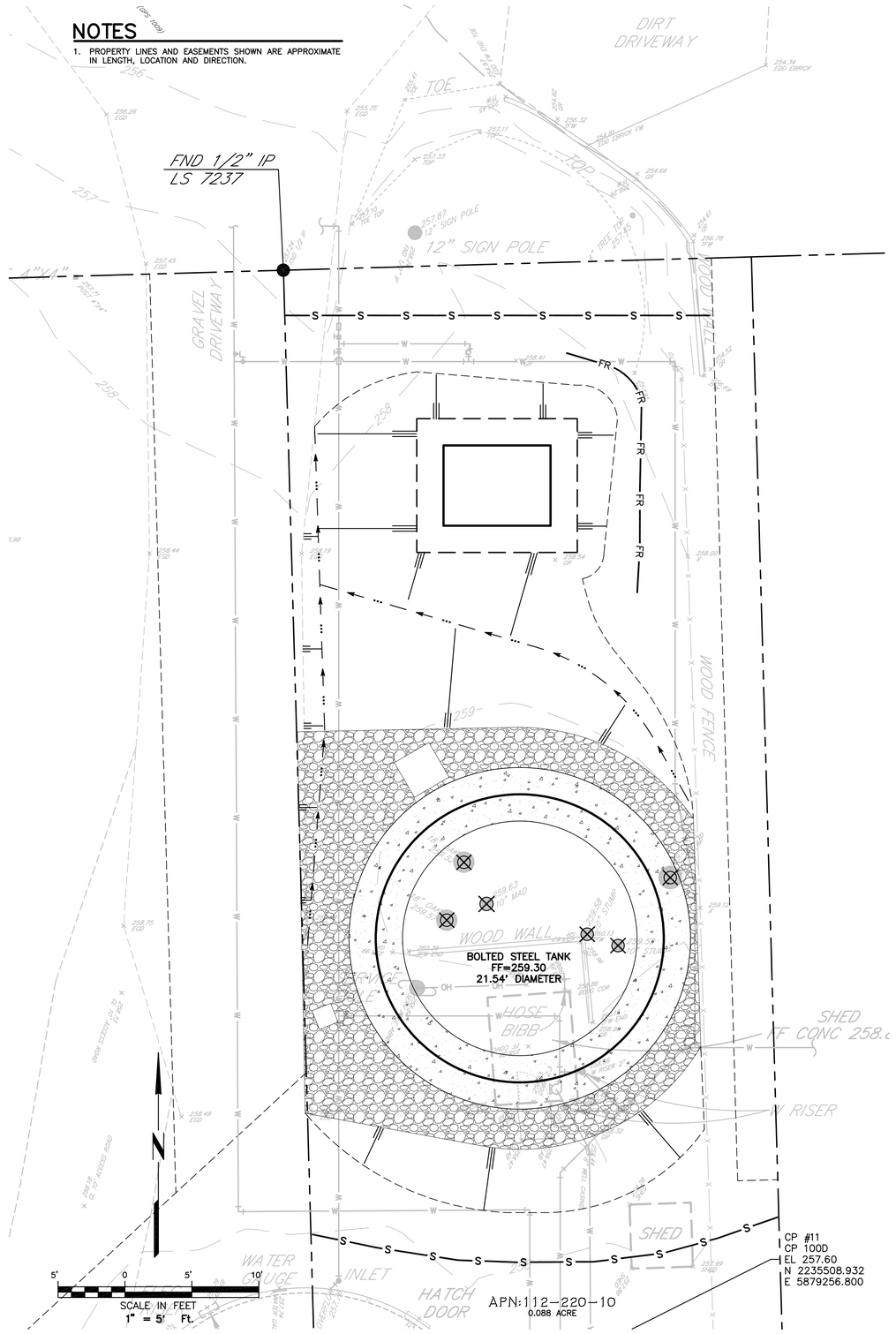
# LEGEND

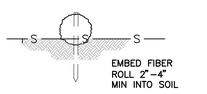
—— S —— SILT FENCE, PER DETAIL THIS SHEET

—— FR —— FIBER ROLL, PER DETAIL THIS SHEET

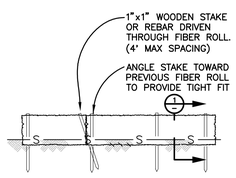
# NOTES

1. PROPERTY LINES AND EASEMENTS SHOWN ARE APPROXIMATE IN LENGTH, LOCATION AND DIRECTION.




SECTION 1

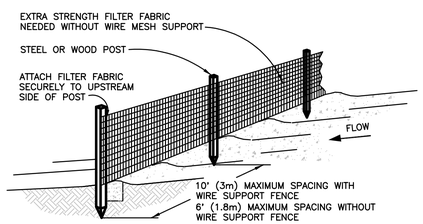


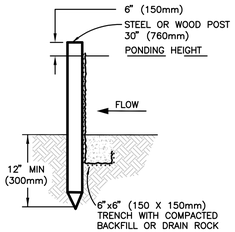

NOTES
1. THE FIBER ROLLS SHALL BE PLACED ON SLOPE CONTOUR.
2. FIBER ROLLS TO BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING. USE STRAW, ROCKS, OR FILTER FABRIC TO FILL GAPS BETWEEN THE FIBER ROLLS AND TAMP THE BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND FIBER ROLLS.

## FIBER ROLL DETAIL

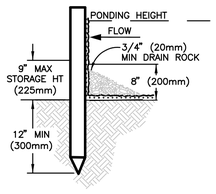
NOT TO SCALE

NOTES
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.




TRENCH DETAIL




INSTALLATION WITHOUT TRENCHING

## SILT FENCE

NOT TO SCALE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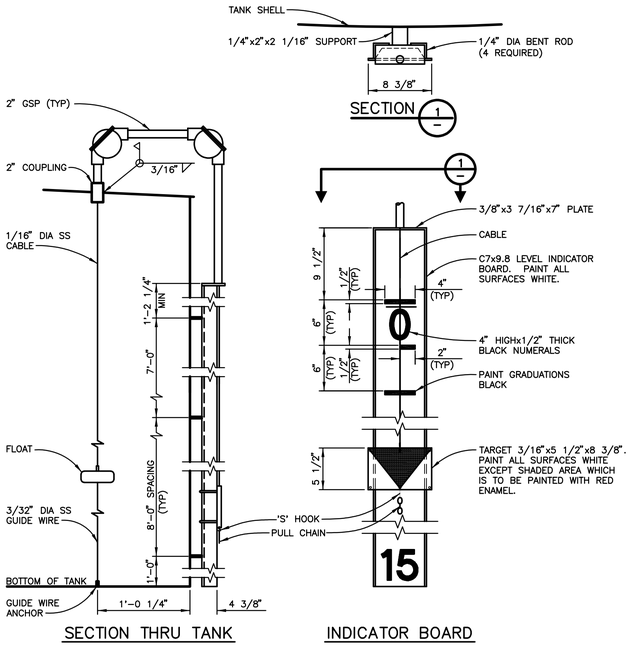
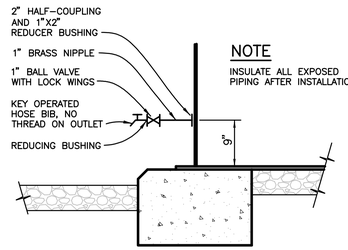
## SEAHAVEN TANK SITE EROSION CONTROL PLAN

SHEET NO.
**14** OF **17**

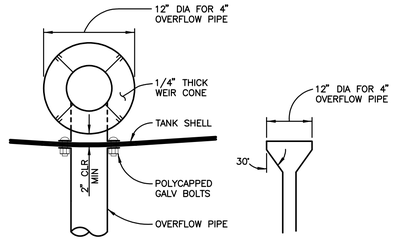
10-23-24 beazor \2630\dwg\2630 07\2630.07 BASE – Seahaven Tank.dwg TAB: 14 S-HAVEN TANK SITE EROS



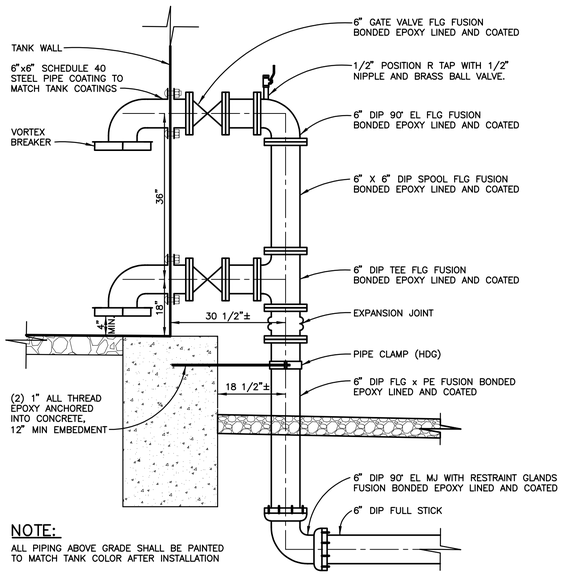

LEVEL INDICATOR LI 6
NOT TO SCALE



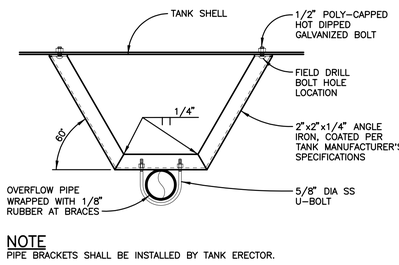

SAMPLE TAP ST 6
NOT TO SCALE



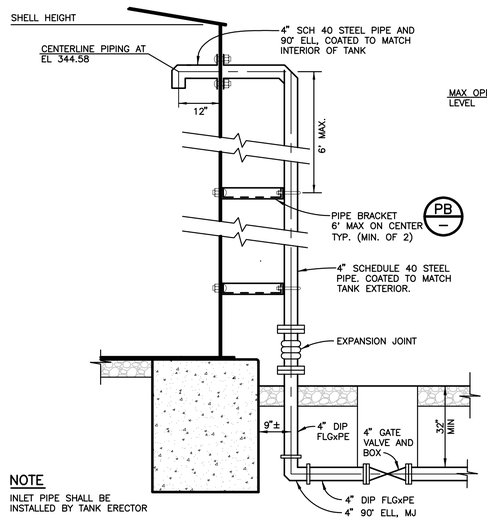

OVERFLOW WEIR OW —
NOT TO SCALE



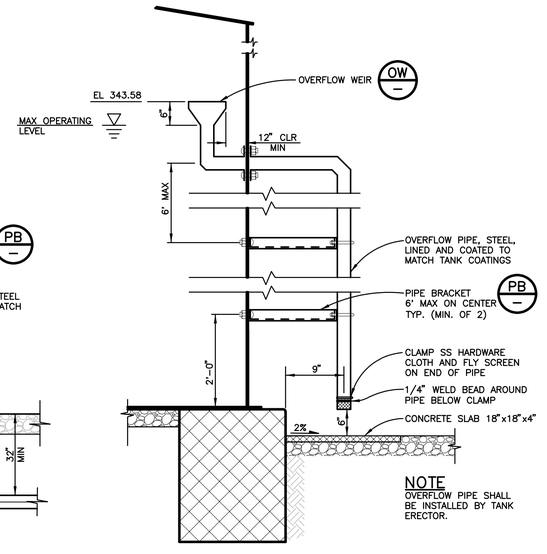

OUTLET PIPE OP 6
NOT TO SCALE




OVERFLOW PIPE BRACKET PB —
NOT TO SCALE




INLET PIPE IP 6
NOT TO SCALE




INTERIOR OVERFLOW IO 6
NOT TO SCALE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DATE 10-25-24

REVISIONS

| NO. | DATE | DESCRIPTION |
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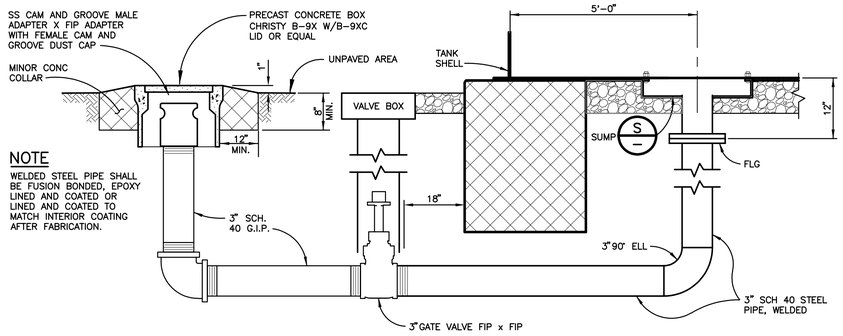
ON A FULL-SCALE DRAWING, LENGTH OF BAR BELOW IS 1-INCH. IF BAR MEASURES LESS THAN 1-INCH, THIS SHEET WAS PLOTTED AT A REDUCED SCALE, WHICH MAY REQUIRE ADJUSTMENT OF SCALE(S) SHOWN ON DRAWING.

| PROJECT | DATE |
|---|---|
| 2630.07 | OCTOBER 2024 |
| DRAWN BY | CHECKED BY |
| ACP | BB |

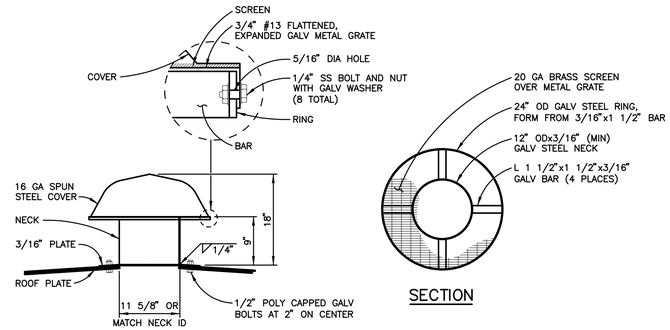
## TANK DETAILS

SHEET NO.
15 OF 17

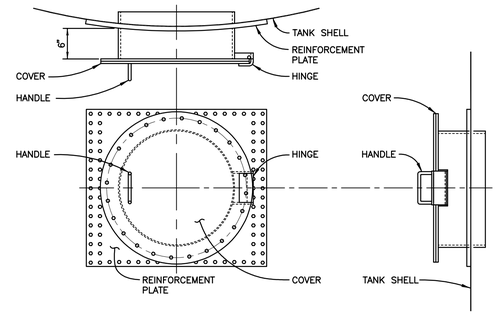
09-18-24 Pathtool \2630\dwg\2630 07\2630.07 DETAILS.dwg TAB: 15 TANK DETAILS



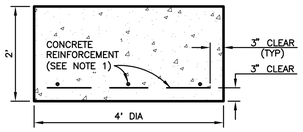

## TANK DRAIN (TD 6)
NOT TO SCALE



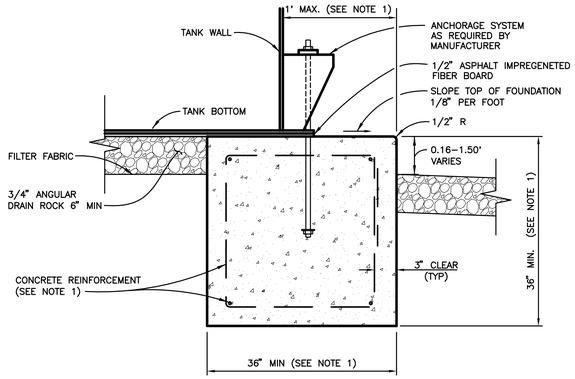

## ROOF VENT (RV 6)
NOT TO SCALE




## SHELL MANWAY (SM 6)
NOT TO SCALE



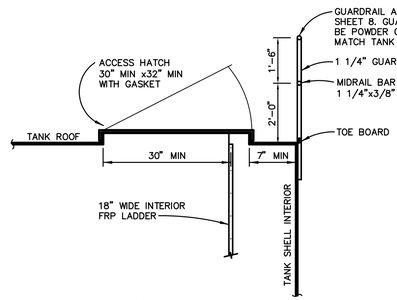

## CENTER COLUMN FOOTING (SEE NOTES 1 AND 5)




## RING FOOTING

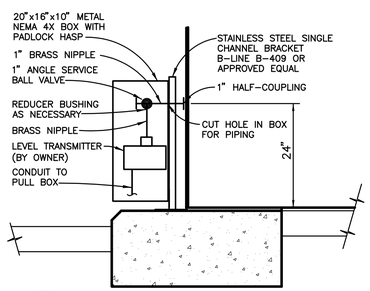
### NOTES
1. FOUNDATION DIMENSIONS AND DETAILS, INCLUDING CENTER COLUMN FOOTING, SHALL BE DESIGNED BY THE TANK MANUFACTURER PRIOR TO CONSTRUCTION. STAMPED ENGINEERING CALCULATIONS FOR THE FOUNDATION DESIGN, INCLUDING SEISMIC, SHALL BE SUBMITTED TO THE OWNER FOR REVIEW PRIOR TO CONSTRUCTION. SEE PLAN FOR AREAS REQUIRING FOUNDATION DEPTHS GREATER THAN THE MINIMUM SHOWN ON THIS DETAIL.
2. FOUNDATION CONDITIONS SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER TO VERIFY DESIGN SOIL BEARING PRESSURE UPON COMPLETION OF FOUNDATION EXCAVATION, BUT PRIOR TO FOUNDATION CONSTRUCTION.
3. FOUNDATION SHALL EXTEND 6" INTO FIRM BEDROCK OR ENGINEERED FILL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT, UNLESS MODIFIED BY A GEOTECHNICAL ENGINEER UPON REVIEWING FOUNDATION EXCAVATION.
4. FOUNDATION BOTTOM SHALL BE LEVEL. CHANGES IN HEIGHT SHALL BE MADE BY STEPPING, FOUNDATION SHOP DRAWING SHALL DETAIL STEPS.
5. CENTER COLUMN FOOTING REQUIRED ONLY IF CENTER COLUMN IS NEEDED.
6. REINFORCEMENT SHALL BE IN ACCORDANCE WITH APPROVED FOUNDATION DESIGN DRAWINGS AND TYPICAL CONCRETE REINFORCEMENT DETAILS THIS SHEET.

## TANK FOUNDATION (TF 6)
NOT TO SCALE



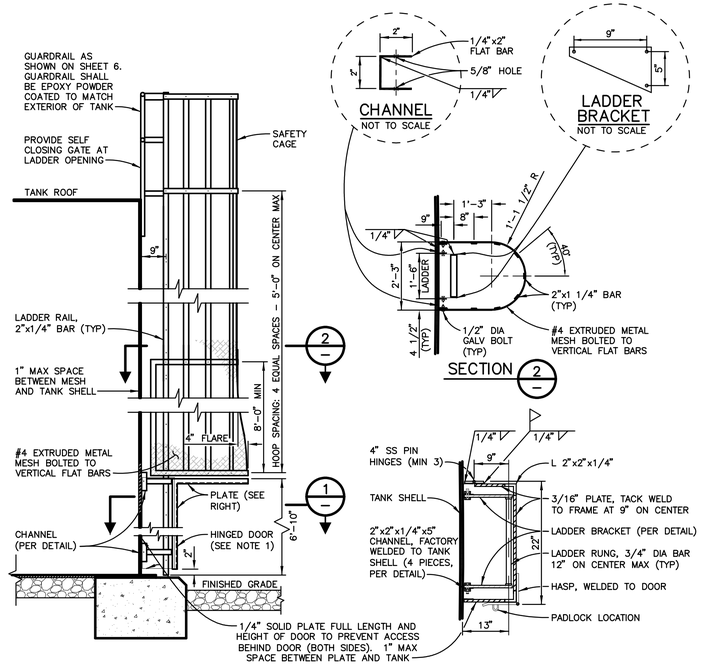

### NOTES
1. USE POLY CAPPED BOLTS AND NUTS FOR LADDER INSTALLATION.

## ROOF HATCH (RH 6)
NOT TO SCALE




### NOTES
1. INSULATE ALL PIPING AFTER INSTALLATION.
2. MOUNT LEVEL TRANSMITTER WITH PANEL MOUNTING BRACKET

## LEVEL TRANSMITTER (LT 6)
NOT TO SCALE




### NOTES
1. EXTERIOR LADDER WITH INTERMEDIATE LANDING AS REQUIRED SHALL COMPLY WITH ALL SAFETY REGULATIONS WITHOUT THE USE OF DEVICES ATTACHED TO THE LADDER RINGS.
2. LADDER, LANDINGS, SAFETY CAGE AND GUARDRAILING TO COMPLY WITH CAL OSHA REQUIREMENTS.
3. NO PART OF THE DOOR SHALL EXTEND INTO CAGE AREA WHEN IN OPEN POSITION.
4. PROVIDE BRACKET ON GUARDRAIL TO STORE EXTENSION.
5. TWO SAF-T-CLIMB HARNESSES AND BOLTS ARE TO BE FURNISHED TO THE OWNER.
6. INSTALL BOX BEHIND DOOR FOR STORAGE OF SAF-T-CLIMB BOLT.
7. SAFETY CAGE, GUARDRAILS, EXPANDED METAL, LADDER DOOR AND SOLID PLATES SHALL BE EPOXY POWDER COATED TO MATCH EXTERIOR OF TANK.

## ACCESS LADDER (AL 6)
NOT TO SCALE

**Brelje & Race**
CONSULTING ENGINEERS
475 Aviation Boulevard, Suite 120
Santa Rosa, CA 95403
v: 707-576-1322
f: 707-576-0469
www.brce.com

REGISTERED PROFESSIONAL ENGINEER
BRENT LEE BEADLE
No. C 60683
Exp. 12-31-26
CIVIL
STATE OF CALIFORNIA

INVERNESS PUBLIC UTILITY DISTRICT

# INVERNESS TANK REPLACEMENT PROJECT

## INVERNESS PUBLIC UTILITY DISTRICT

MARIN COUNTY, CALIFORNIA

**PRELIMINARY**
FOR STUDY PURPOSES ONLY
DATE 10-25-24

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
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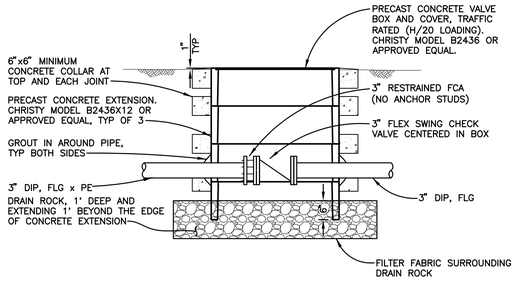
|---|---|
| 2630.07 | OCTOBER 2024 |
| DRAWN BY | CHECKED BY |
| ACP | BB |

# TANK DETAILS

SHEET NO.
16 OF 17

TAB: 16 TANK DETAILS
09-18-24 Pathtest \2630\dwg\2630 07\2630.07 DETAILS.dwg




## SWING CHECK VALVE BOX INSTALLATION DETAIL

NOT TO SCALE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| 2630.07 | OCTOBER 2024 |
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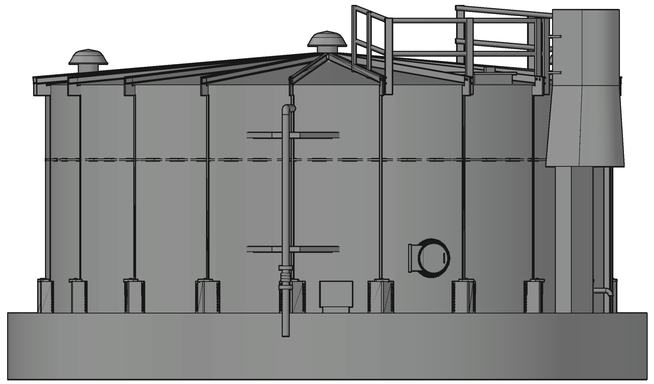
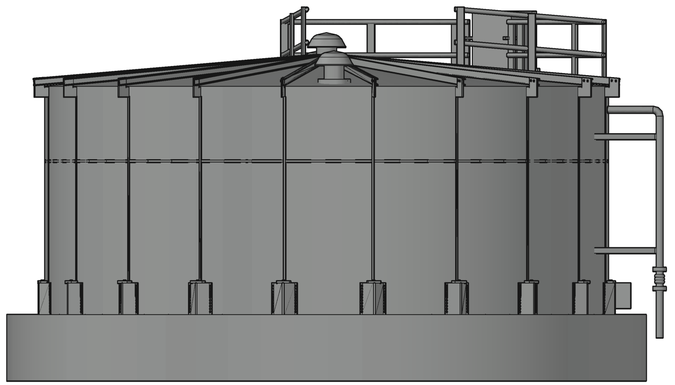
| JLP | BB |

## WATER SYSTEM DETAILS

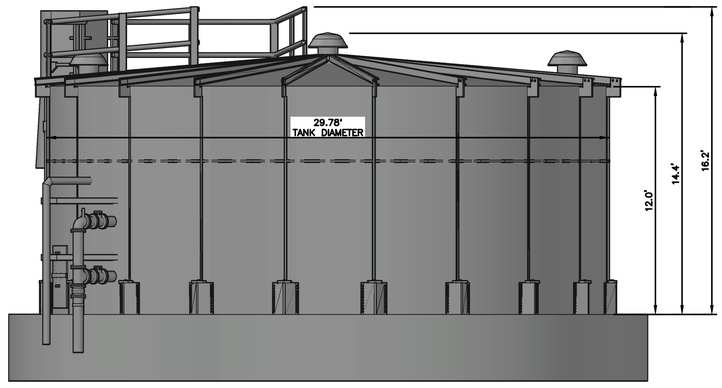
SHEET NO.
17 OF 17



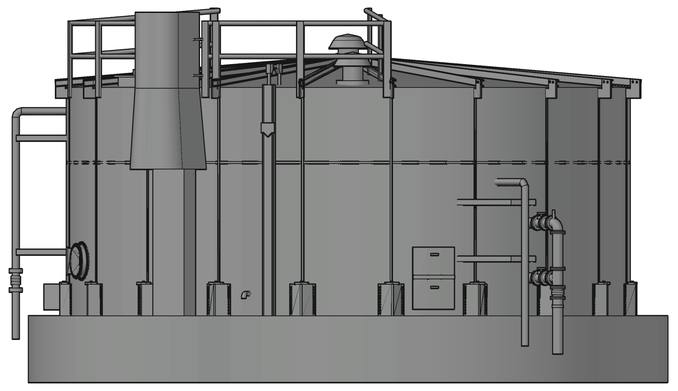
NORTHEAST ELEVATION
NOT TO SCALE



SOUTHEAST ELEVATION
NOT TO SCALE




SOUTHWEST ELEVATION
NOT TO SCALE



NORTHWEST ELEVATION
NOT TO SCALE

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# INVERNESS TANK REPLACEMENT PROJECT

## INVERNESS PUBLIC UTILITY DISTRICT

MARIN COUNTY, CALIFORNIA

**PRELIMINARY**
FOR STUDY PURPOSES ONLY
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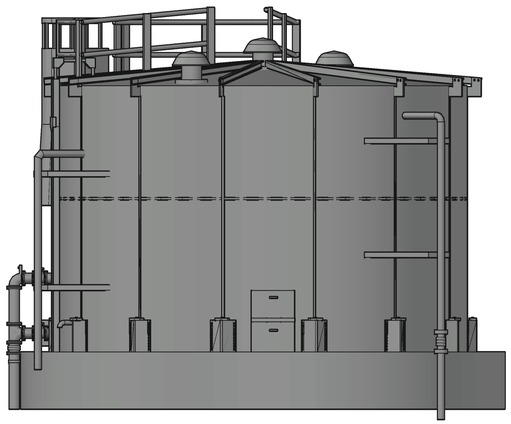
| 2630.07 | OCTOBER 2024 |
| DRAWN BY | CHECKED BY |
| – | BB |

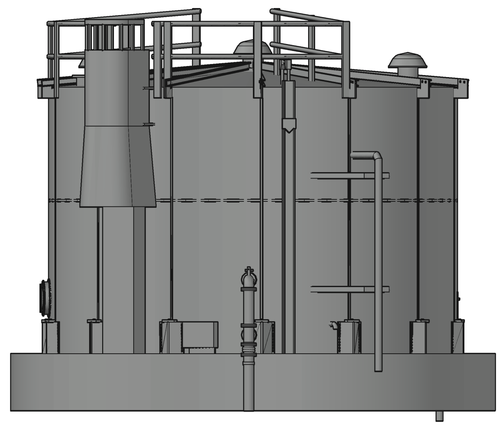
# COLBY TANK ELEVATIONS

SHEET NO.
1 OF 2

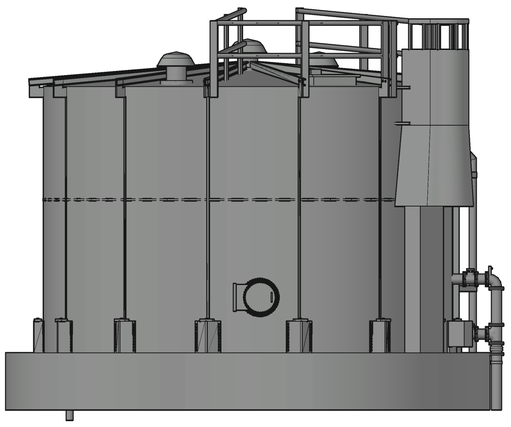
11-01-24 Patheal \2630\dwg\2630 07\DESIGN\2630.07 DESIGN-3d Tank Prep-COLBY.dwg TAB: ELLEVATIONS



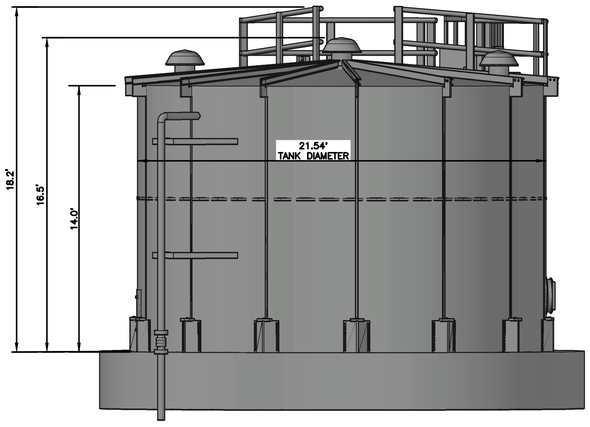
WEST ELEVATION
NOT TO SCALE



NORTH ELEVATION
NOT TO SCALE



EAST ELEVATION
NOT TO SCALE




SOUTH ELEVATION
NOT TO SCALE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# INVERNESS TANK REPLACEMENT PROJECT

## INVERNESS PUBLIC UTILITY DISTRICT

MARIN COUNTY, CALIFORNIA

**PRELIMINARY**
FOR STUDY PURPOSES ONLY
DATE 10-30-24

REVISIONS

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| DRAWN BY | CHECKED BY |
| JLP | BB |

## SEAHAVEN TANK ELEVATIONS

SHEET NO.
2 OF 2

11-01-24 Patheal \2630\dwg\2630 07\DESIGN\2630.07 DESIGN-3d Tank Prep-SEAHAVEN.dwg TAB: ELEVATIONS

INVERNESS PUBLIC UTILITY DISTRICT
FIRE DEPARTMENT • WATER SYSTEM
POST OFFICE BOX 469
INVERNESS, CA 94937
(415) 669-1414 • FAX (415) 669-1010 • INFO@INVERNESSPUD.ORG

# OCTOBER 2024 – WATER SYSTEM REPORT –

**[ OCTOBER 2024 PRODUCTION TOTAL: 2,178,400 GALLONS:**
**AVERAGE 70,271 *gal/day* = 48.8 average *gpm* ]**

## Water Quality

( * GPD = gallons per day; gpm = gallons per minute; ppm = parts per million )

All sources are filtered by first Ultra and then Nano filters; chlorine and turbidity correct continuously; no positive coliform bacteria samples from distribution sample grabs. Samples of distribution water are tested twice monthly and influent raw water sources are being collected once a month for lab analysis of coliform content.

Average Chlorine ($CL_2$) dose at F1→ approximately 0.45 ppm; Average $CL_2$ dose at F3→ approximately 0.55 ppm

## Major Activities and Events

1. Monthly reports sent to CA RWQCB DHS / SWRCB Drinking Water Division
2. Regular flushing of 4" iron main on Via de la Vista & Escondido 2" PVC lines
3. Clearing vegetation around hydrants
4. F1:
   - power outage on Inverness Mesa and Aberdeen grid: [ PG&E working on equipment ]
   - Ultra unit A: repaired & replaced 2 valves that had been causing PDT failures
   - D4 initialized and turned in (all upper diversions in system in service for first time this year ! )
   - R&R the 4-way valves on both Caustic and Chlorine LMI CEB chemical feed pumps
   - Repaired 3-way valve on plant effluent Chlorine-dosing pump.
   - Finalized details for Pure-Aqua to manufacture new SS manifolds for retrofit of Nano units
5. F3: SCADA radio continues to cut-out…intermittently failing but plant running ok
   - CIP cleaning of Nano unit
   - Cracked Union nut found on Nano Unit recycle 'rotometer' flow meter
   - R&R the 3&4-way valves on Chlorine and Caustic LMI pumps and re-primed
6. Trees cut down on Sea Haven site in preparation for Tank Replacement project.
7. Colby #1 wood tank sprang large leak in rotten stave. Isolated tank and drained in order to patch hole (Colby system fed from F2 Td->Colby for several days during the repairs and disinfection of CW1)
8. All customer meters read. System use and production down from previous month [which is expected for this time of year, although several customer-leaks & high-usage were discovered]
9. Water system Squad 335 out of commission, fuel system failure? (fails to start)
10. S-333 truck developed sudden misfire on 2 cylinders but quickly repaired by Cheda's
11. Continuing installing gopher protection in water meter boxes

Kenneth J Fox

Senior Water Operator

*Inverness Public Utility District*
*Monthly Water System Report*

# *O C T O B E R  2 0 2 4*

Prepared by Ken Fox T3, Senior Water Operator

| OCTOBER | Rainfall ( in inches " ) | | October | | October | | | |
|---|---|---|---|---|---|---|---|---|
| Rainfall (inches) " | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| Total for Month | 0.58" | 1.07" | 0.20" | 11.40" | 0.09" | 0.07" | | |
| Year To Date (7/01 →9/01) | 0.72" | 1.39" | 1.23" | 12.11 | 0.39" | 0.19" | | |
| Average yearly since 1925 | 37.43" | 37.39" | 37.26" | 37.32" | 37.57" | 37.26" | | |

( * GPD = gallons per day; gpm = gallons per minute;

| End of Month Stream Flow Measurements | | | | |
|---|---|---|---|---|
| | 2024 | | 2023 | |
| Diversions | October | | October | |
| 1st Valley Upper Intakes | *gpm** | GPD* | *gpm* | GPD |
| D1 | *7* | 10,080 | *6* | 8,640 |
| D2 | *26* | 37,440 | *24* | 34,560 |
| D3 | *17* | 24,480 | *15* | 21,600 |
| 50 | | | ***45*** | |
| 2nd Valley Upper Intakes | | | | |
| D4 | *14* | 20,160 | *10* | 14,400 |
| D5 | *20* | 28,800 | *16* | 23,040 |
| D6 | *21* | 30,240 | *16* | 23,040 |
| 55 | | | ***42*** | |
| 3rd Valley Upper Intakes | | | | |
| D7 | *20* | 28,800 | *20* | 28,800 |
| D8 | *7* | 10,080 | *6* | 8,640 |
| 27 | | | ***26*** | |
| **Totals** | **132** | **190,080** | ***113*** | 162,720 |

| 2024 Recent 3-month EOM Streamflows | | | |
|---|---|---|---|
| → | Sep-24 | Jul-24 | Jun-24 |
| *gpm* | 111 | 153 | 200 |
| GPD | 159,840 | 220,320 | 288,000 |

| Sources Used: October | 2024 | 2023 |
|---|---|---|
| 1st Valley Upper Intakes | 49% | 51% |
| 2nd Valley Upper intakes | 29% | *32%* |
| 3rd Valley Upper intakes | 22% | 17% |
| 1st Valley Lower Intake (L1) | | |
| 2nd Valley Lower intake | | |
| Wells. (W1,W3,W4, etc.) | | |
| Total | 100.0% | 100% |

| Distribution System Usage / | # days –> | 31 | | 31 |
|---|---|---|---|---|
| | Oct-24 | | | Oct-23 |
| Distribution Zone | Gallons | % of Use | | % of Use |
| Colby | 839,300 | 39% | 771,200 | 35% |
| Tenney | 817,200 | 38% | 1,013,800 | 46% |
| Conner | 52,900 | 2% | 60,600 | 3% |
| Stockstill | 287,200 | 13% | 235,600 | 11% |
| Seahaven | 181,800 | 8% | 142,300 | 6% |
| Total for Month => | 2,178,400 | 100% | 2,223,500 | 100% |
| Average for Month => | *GPD* | *gpm* | *GPD* | *gpm* |
| Oct-2024 | 70,271 | 48.8 | 71,726 | 49.8 |

# Report on Water Customer Payments and Billings, Sep/Oct 2024

1. What our customers owed us at the beginning of the period (Sept. 1):

| | | |
|---|---|---|
| Current charges (from bills sent out on August 28, 2024) | 114,808.81 | |
| Unpaid prior charges (3.65% of total amount owed to us) | 4,350.71 | |
| **Total Amount Owed Us on Sept. 1, 2024:** | | **119,159.52** |

2. We received the following **payments** from our customers during the period:

| | | | |
|---|---|---|---|
| Electronic payments: | 80,463.18 | (73.0%) | |
| Payments by check: | 29,733.17 | (27.0%) | |
| **Total Payments Received During September & October:** | | | - **110,196.35** |

3. We posted the following **charges** to our customers' accounts during the period:

| | | | |
|---|---|---|---|
| Write-offs: | -- | | |
| Adjustments: | -- | | |
| Basic charges (future): | 84,317.53 | 519 Basic charges for Nov/Dec (billed on 10/29)* | |
| X-C charges (future): | 234.90 | 18 Cross-Connection charges for Nov/Dec (billed 10/29) | |
| Usage charges (net): | 21,564.92 | Usage charges for 8/24 to 10/24/24 (billed on 10/29)† | |
| Misc. charges: | 300.00 | Such as account setup, late pay, & ret'd check charges | |
| Refused payments: | -- | No returned checks | |
| Refunds: | 159.21 | 3 closed account credit balance refunds | |
| **Total Charges Posted During September & October:** | | | + **106,576.56** |

4. Thus, the **amount our customers owed us on August 31** (the end of the period) was: **115,539.73**
   (of which 5.60%, or $6,469.19, was past-due charges)

---

* Bimonthly Basic Charges (for Nov/Dec): 516 customers at $163.09; 1 Lifeline customer at $81.55; 2 Lifeline customers at $40.77.

† **Total billed usage was $26,616.73**, less 4 credits totaling $5,051.81 for prior-period leak adjustments.

---

Reconciliation with BofA checking account:
There was one deposit in transit on 10/31/2024 in the amount of $3,449.52. Thus, the A/R balance on the District's books as of 10/31 should be $118,989.25.

---

**Scheduled AutoPay receipts: $66,739.03 on Nov. 19, 2024 (from 315 customers, which is 60.7% of the total of 519 billed customers).**
**A temporary security debit will be posted to IPUD's checking account in the amount of $66,739.03 on or about Nov. 15, 2024 (subject to adjustments).**

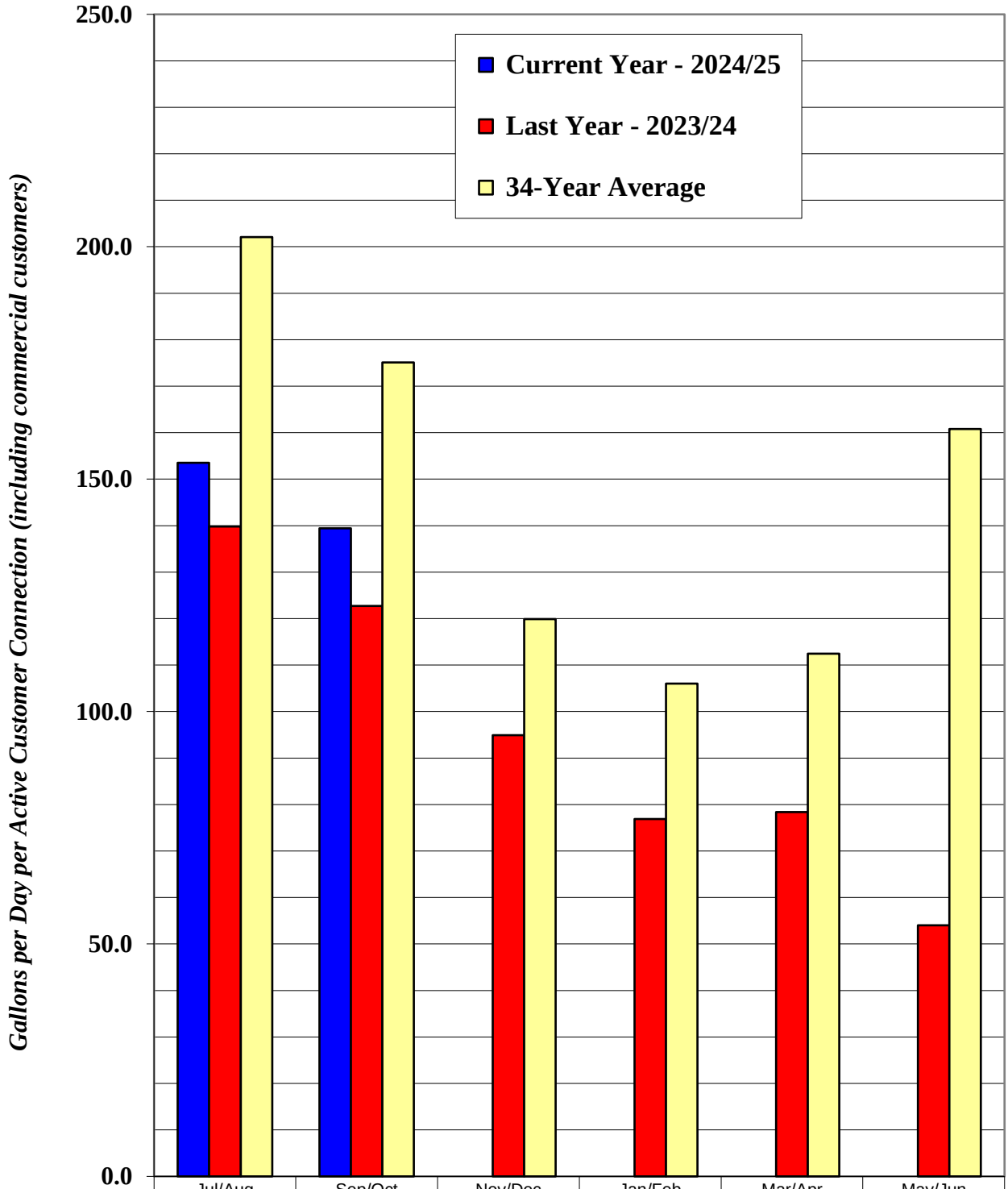
---

**Report on Number of Discontinuations of Residential Service** (pursuant to paragraph (g) of IPUD Water System Regulation 303 and in compliance with Chapter 6, "Discontinuation of Residential Water Service," of Part 12, Division 104, of the Health and Safety Code (HSC) of the State of California)

Period covered: September/October 2024
Number of residential services discontinued for inability to pay during the covered period: 0
Number of residential services discontinued for inability to pay during a previous period and still on discontinued status at the close of the covered period: 0

*Inverness Public Utility District Water System*

# Average Daily Water Usage per Active Customer




| | Jul/Aug | Sep/Oct | Nov/Dec | Jan/Feb | Mar/Apr | May/Jun |
|---|---|---|---|---|---|---|
| Current Year - 2024/25 | 153.5 | 139.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Last Year - 2023/24 | 139.8 | 122.7 | 94.9 | 76.9 | 78.4 | 54.0 |
| 34-Year Average | 202.1 | 175.1 | 119.9 | 106.0 | 112.5 | 160.8 |

# FIRE DEPARTMENT REPORT

October 2024 / November Board Meeting

## Incidents

| *Number* | *Date* | |
|---|---|---|
| #24-112 | 10/05 | **Vehicle accident** @ Bear Valley Rd. Non-injury.<br>*Attendance*: Jim Fox, David Briggs |
| #24-113 | 10/06 | **EMS** @ Vallejo Ave. Inverness for landing zone.<br>*Attendance*: Jim Fox, David Briggs, Greg Eastman, Tim Olson. |
| #24-114 | 10/06 | **Vehicle accident** @ SFD and Drakes View for vehicle into a power pole.<br>*Attendance*: Jim Fox, David Briggs, Brian Cassel, Burton Eubank, Andrew Bock. |
| #24-115 | 10/09 | **EMS** @ Madrone Ave for asthma. M94 transport.<br>*Attendance*: Jim Fox, David Briggs, Brian Cassel, Burton Eubank, Tim Olson, Tom Fox. |
| #24-116 | 10/15 | **EMS** @ Via de la Vista for difficulty breathing. M94 transport.<br>*Attendance:* Jim Fox, Burton Eubank, Tim Olson, Tom Fox, Jack Von Thaer |
| #24-117 | 10/15 | **Accidental tone out** |
| #24-118 | 10/18 | **Vehicle accident** @ Pt. Reyes-Petaluma and Shoreline for motorcycle down.<br>*Attendance:* David Briggs, Jim Fox, Cassidy Russell, Greg Eastman, Brian Cassel, Burton Eubank, Tim Olson, Tom Fox |
| #24-119 | 10/19 | **Vehicle accident** @ SFD and yacht club. No merit.<br>*Attendance:* Brian Cassel, David Briggs, Dennis Holton, Jim Fox, Tim Olson, Tom Fox |
| #24-120 | 10/20 | **EMS** @ Portola for an allergic reaction. M94 transport.<br>*Attendance:* David Briggs, Jim Fox, Tim Olson |
| #24-121 | 10/25 | **EMS** @ Madrone for diabetic problem<br>*Attendance:* David Briggs, Jim Fox |
| #24-122 | 10/25 | **EMS** @ Park Ave for a lift assist.<br>*Attendance:* David Briggs, Sydney Knudsen |
| #24-123 | 10/27 | **EMS** @ Inverness Store for a person down. Person was napping.<br>*Attendance:* David Briggs, Brian Cassel, Jim Fox, Tom Fox |

## Trainings

**October 12:** Discussed new pagers and radio set ups and practiced on them.
*Attendees*: Andrew Bock, Burton Eubank, David Briggs, Dennis Holton, Greg Eastman, Jay Borodic, Jim Fox, Sydney Knudsen, Tim Olson, Tom Fox

**October 29:** Discussed vehicle accident response.
*Attendees*: Brian Cassell, David Briggs, Dennis Holton, Jay Borodic, Jim Fox, Ken Fox, Nikki Spencer, Silas Blunk

## Activities and Maintenance

1. NFIRS data preparation.
2. New volunteer training.
3. Defensible space violation research and outreach.
4. UTV set up
5. MERA transition
6. Holiday fundraiser

## Personnel

Jim Fox, Ken Fox, Tom Fox, Burton Eubank, Brian Cassel, Tim Olson, Dennis Holton, David Briggs, Nikki Spencer, Greg Eastman, Jay Borodic, Liam Riley, Andrew Bock, Jacob Leyva, Cassidy Russell, Andrew Bock, Sarah Flamm, Sydney Knudsen, Silas Blunk

**Jim Fox, Chief**

# MWPA MONTHLY REPORT

October 2024 / November Board Meeting

## Local Projects

- Vegetation maintenance activities in watershed on evacuation routes as needed.

## Defensible Space

- IPUD staff continue to send letters to homeowners and residents who were identified as having poor defensible space.
    - To date, 35 letters have been sent to residents and homeowners. Ten of those were sent last week.
    - The fire department has received three responses to those letters. Staff met with those residents at their homes, walked their property, and discussed the most urgent issues to resolve.
    - Staff have stressed that vegetation maintenance directly adjacent to the home is the highest priority. We also discussed likely wildfire and emergency scenarios and where around the home and property the most effective work could be focused on.
    - Staff gave residents details on grant opportunities available through the MWPA that can help pay for work.

## West Marin CORE Project Activity

- CORE projects approved. Inverness will receive $35,000 for a utility vehicle (UTV).
    - UTV was received in September and is now in use.
- Evacuation route clearing 10-25 feet from roadway will happen on Woodhaven, Kehoe, Rannoch and Stirling in late November or December.
    - Work was delayed due to an independent contractor backing out at the last minute.
    - Advance notice has been given to all IPUD homeowners and a door hanger will be placed on homes in the immediate area that work is planned.

## Meetings / Committees

    - None. Board meetings will begin again in the new year.

# FY25 Core Projects with FY24 Rollover Balances

**UPDATED:** 11/15/2024

| FY25 - Project Name | Proposal Code | Budget Requested | *TBD-FY24 Rollover* | *Adjustments* | Revised Budget | Spent to-date | REMAINING |
|---|---|---|---|---|---|---|---|
| Camp Tamarancho Shaded Fuel Break 24/25 | CM-MRN-25-22-C-FB | 133,822 | | | 133,822 | - | 133,822 |
| Greater Ross Valley Shaded Fuel Break 2024 2025 | CM-MWPA-22-02-C-FB | 862,409 | - | | 862,409 | 526,128 | 336,281 |
| Central Marin Zone Evacuation Route Core Project Implementation 2024 2025 | CM-MWPA-22-03-C-ER | 223,037 | 221,617 | | 444,654 | 102,269 | 342,385 |
| Greater Ross Valley Defensible Space and Home Hardening Evaluation and Inspection Program Supplemental Funding 2024 2025 | CM-MWPA-23-02-C-EV | 267,644 | 165,741 | | 433,385 | 139,679 | 293,706 |
| FireAside Defensible Space Inspection Application Subscription | JPA-MWPA-22-01-C-EV | 140,000 | | | 140,000 | 191,593 | (51,593) |
| Marin Wildfire Chipper Day Program | JPA-MWPA-22-19-C-CH | 1,500,000 | | | 1,500,000 | 455,953 | 1,044,047 |
| Marin Wildfire Direct Assistance/Grants Program | JPA-MWPA-22-20-C-GP | 900,000 | 100,000 | | 1,000,000 | 294,241 | 705,759 |
| Regional Wildfire Disaster Preparedness Coordination | JPA-MWPA-22-23-C-PE | 65,000 | 18,168 | | 83,168 | - | 83,168 |
| MWPA Genasys FY24/25 Subscription | JPA-MWPA-23-02-C-EM | 348,450 | (139,850) | | 208,600 | - | 208,600 |
| Data Driven Wildfire Risk Framework | JPA-MWPA-23-03-C-ME | 320,000 | 14,477 | | 334,477 | 66,112 | 268,365 |
| Wildfire Risk Perception Survey | JPA-MWPA-23-08-C-ME | 35,000 | | | 35,000 | 20,090 | 14,910 |
| MWPA Evacuation/Ingress/Egress Risk Assessment | JPA-MWPA-23-09-C-ES | 0 | 214,694 | | 214,694 | 315 | 214,379 |
| MWPA Operational Costs | JPA-MWPA-23-10-C-OH | 310,250 | 141,669 | | 451,919 | 62,406 | 389,513 |
| MWPA Environmental Compliance and Implementation Support for Core Projects FY2024 25 | JPA-MWPA-23-11-C-EC | 371,600 | 377,348 | | 748,948 | 56,199 | 692,749 |
| MWPA Vegetation Management Specialist Positions | JPA-MWPA-24-77-C-ST | 100,000 | 64,642 | | 164,642 | 67,436 | 97,206 |
| GIS Program Development, Phase 2 | JPA-MWPA-24-78-C-ME | 100,000 | 52,952 | | 152,952 | 88,819 | 64,133 |
| Wildfire Education Services and Resources, Fire Safe Marin | JPA-MWPA-24-79-C-PE | 975,000 | 6,031 | | 981,031 | 203,217 | 777,814 |
| Peer to Peer Ambassadors: Prepared and Resilient Community Outreach | JPA-MWPA-24-80-C-PE | 0 | 19,902 | | 19,902 | - | 19,902 |
| County Wide Fire Road Inventory and Assessment | JPA-MWPA-25-92-C-FB | 200,000 | | | 200,000 | - | 200,000 |
| Marin Highlands Fuel Break Maintenance | NOV-NOV-21-05-C-FB | 35,000 | | | 35,000 | 23,466 | 11,534 |
| Ignacio Valley Fuel Break Maintenance | NOV-NOV-21-08-C-FB | 35,000 | | | 35,000 | 23,800 | 11,200 |
| Novato Evacuation Route | NOV-NOV-22-01-C-ER | 80,858 | 74,965 | | 155,823 | 7,000 | 148,823 |
| Marin Valley Goat Grazing Maintenance | NOV-NOV-22-02-C-FB | 30,000 | | | 30,000 | - | 30,000 |
| Bahia Fuel Break Maintenance | NOV-NOV-22-03-C-FB | 35,000 | | | 35,000 | 35,524 | (524) |
| Northeast Novato Evacuation Routes | NOV-NOV-22-04-C-ER | 60,000 | | | 60,000 | 15,973 | 44,027 |
| Greater Novato Shaded Fuel Break | NOV-NOV-23-01-C-FB | 555,000 | (616,158) | 521,291 | 460,133 | 818,828 | (358,695) |

# FY25 Core Projects with FY24 Rollover Balances

| FY25 - Project Name | Proposal Code | Budget Requested | *TBD-FY24 Rollover* | *Adjustments* | Revised Budget | Spent to-date | REMAINING |
|---|---|---|---|---|---|---|---|
| Novato Fire Road Maintenance | NOV-NOV-23-04-C-FB | 40,000 | | | 40,000 | - | 40,000 |
| Valley Memorial Park Eucalyptus Removal and Revegetation | NOV-NOV-23-05-C-FB | 15,000 | | | 15,000 | - | 15,000 |
| Novato Long Range Acoustic Device Warning System Plan | NOV-NOV-23-06-C-AL | 200,000 | | | 200,000 | - | 200,000 |
| Novato Fire Adaptive Multi Media Campaign | NOV-NOV-23-08-C-PE | 130,000 | | | 130,000 | 2,000 | 128,000 |
| Novato Senior Vegetation Management Specialist | NOV-NOV-23-09-C-ST | 60,000 | 138 | | 60,138 | - | 60,138 |
| Novato Vegetation Management Program Manager | NOV-NOV-23-10-C-ST | 165,000 | | | 165,000 | - | 165,000 |
| Novato Open Space and HOA Lands | NOV-NOV-24-01-C-FB | 90,000 | | | 90,000 | 65,428 | 24,572 |
| Novato Vegetation Management Specialist | NOV-NOV-24-02-C-ST | 120,000 | 16,727 | | 136,727 | - | 136,727 |
| Novato Fire Smart Demonstration Gardens | NOV-NOV-24-03-C-PE | 30,000 | | | 30,000 | - | 30,000 |
| San Rafael Fire Road Vegetation Management 24 25 | SR-SNR-22-01-C-FB | 25,000 | 7,330 | | 32,330 | - | 32,330 |
| San Rafael San Anselmo Fuel Reduction Zone (SR) 24 25 | SR-SNR-22-04-C-FB | 870,506 | 220,682 | | 1,091,188 | 246,379 | 844,809 |
| Marinwood and San Rafael Open Space Flashy Fuels Management 24 25 | SR-SNR-22-05-C-FB | 200,000 | 48,382 | | 248,382 | - | 248,382 |
| San Rafael Evacuation Route Vegetation Management 24 25 | SR-SNR-22-07-C-ER | 75,000 | 79,133 | | 154,133 | - | 154,133 |
| San Rafael Zone Open Space Defensible Space Fuel Reduction 24 25 | SR-SNR-22-10-C-FB | 75,000 | | | 75,000 | - | 75,000 |
| San Rafael Direct Residence Assistance | SR-SNR-22-11-C-GP | 0 | 59,887 | | 59,887 | 4,581 | 55,306 |
| Open Space Fuel Break Maintenance | SR-SNR-22-12-C-FB | 100,000 | | | 100,000 | - | 100,000 |
| SRFD Vegetation and Project Management Staff 24 25 | SR-SNR-23-05-C-ST | 300,000 | 14,877 | | 314,877 | - | 314,877 |
| Deer Valley Fuels Reduction Project | SR-SNR-25-48-C-FB | 100,000 | | | 100,000 | - | 100,000 |
| Mill Valley Summit Ralston Forest Health Restoration | SM-MLV-23-01-C-FB | 0 | 166,090 | | 166,090 | 54,880 | 111,210 |
| Southern Marin Voluntary Abatement Pilot Program 24/25 | SM-MLV-25-14-C-ER | 58,000 | | | 58,000 | - | 58,000 |
| Fuel Reduction Project Scoping, Design, and CEQA Study Proposal 24/25 – Mill Valley Cost Share | SM-MLV-25-15-C-FB | 89,525 | | | 89,525 | - | 89,525 |
| Throckmorton Ridge Vegetation Management (Ridgecrest Fuel Reduction) | SM-MRN-22-04-C-FB | 200,000 | | | 200,000 | - | 200,000 |
| Marin City Fuel Reduction Zone 2023 2024 | SM-MRN-23-03-C-FB | 0 | 149,233 | | 149,233 | - | 149,233 |
| Community Emergency Warning Signs | SM-MRN-24-12-C-AL | 0 | 160,000 | | 160,000 | - | 160,000 |
| Muir Beach Hwy 1 Evacuation Corridor / Banducci Ranch | SM-MUR-22-06-C-ER | 0 | 59,316 | | 59,316 | | |

# FY25 Core Projects with FY24 Rollover Balances

| FY25 - Project Name | Proposal Code | Budget Requested | *TBD-FY24 Rollover* | *Adjustments* | Revised Budget | Spent to-date | REMAINING |
|---|---|---|---|---|---|---|---|
| Highway 1 Evacuation Corridor, Southbound | SM-MUR-24-04-C-ER | 50,000 | 50,000 | | 100,000 | - | 100,000 |
| Terwilliger Grove Evacuation Route Vegetation Management | SM-MWPA-25-89-C-ER | 80,000 | | | 80,000 | - | 80,000 |
| Southern Marin Emergency Notification Network C_24/25 | SM-SOM-22-01-C-AL | 156,000 | 6,475 | | 162,475 | - | 162,475 |
| Mill Valley Sheltered Fuel Break | SM-SOM-22-02-C-FB | 0 | 124,880 | | 124,880 | 124,880 | 0 |
| Regional Neighborhood Response Coordinator | SM-SOM-22-03-C-ST | 0 | 25,986 | | 25,986 | - | 25,986 |
| Tamalpais Homestead Valley Fuel Break 24/25 | SM-SOM-22-05-C-FB | 80,000 | 18,306 | | 98,306 | 41,440 | 56,866 |
| Ring Mountain Fuel Break 24/25 | SM-SOM-23-05-C-FB | 50,000 | 19,991 | | 69,991 | 43,680 | 26,311 |
| SMFD Vegetation Management Specialist 24/25 | SM-SOM-23-06-C-ST | 190,646 | 20,142 | | 210,788 | - | 210,788 |
| Southern Marin Voluntary Abatement Pilot Program 24/25 | SM-SOM-25-36-C-ER | 108,000 | | | 108,000 | 4,784 | 103,216 |
| Fuel Reduction Project Scoping, Design, and CEQA Study 24/25 Southern Marin Cost Share | SM-SOM-25-37-C-FB | 101,000 | | | 101,000 | 2,824 | 98,176 |
| West Marin Zone Evacuation Route Core Project | WM-MRN-22-04-C-ER | 103,290 | | 80,000 | 183,290 | - | 183,290 |
| West Marin NPS project implementation | WM-MRN-24-13-C-FB | 137,600 | 42,717 | (80,000) | 100,317 | - | 100,317 |
| Project Treatment Monitoring and Maintenance | WM-MRN-25-23-C-FB | 77,000 | 17,300 | | 94,300 | - | 94,300 |
| Utility Task Vehicles for Wildfire Prevention | WM-MRN-25-26-C-EQ | 70,000 | | | 70,000 | 35,000 | 35,000 |
| Public Works Plan and Coastal Planning CEQA | WM-MWPA-24-69-C-FB | 0 | 174,589 | | 174,589 | 41,565 | 133,024 |
| | | 11,829,637 | 2,198,379 | 521,291 | 14,549,307 | 3,866,488 | 10,623,502 |
| | | | | Core Budget w/o grant | **14,028,016** | | |

Inverness Public Utility District
Board Meeting

# Agenda Item No. 6

## Business Of The District

A. **Resolution 291-2024:** Designating The Time And Place For Holding Regular Meetings

B. **Approval Of The 2025 Board Meeting Schedule**

C. **Consider And Approve Establishing Funding Goals for Long-Term Unfunded Liabilities of Pension and Other Post Employment Benefits (OPEB) and Consider and Approve Proposal To Establish a Section 115 Pension Prefunding Trust Account with CalPERS (CEPPT).**

*Inverness Public Utility District*

# RESOLUTION NO. 291-2024

## A RESOLUTION OF THE BOARD OF DIRECTORS OF THE INVERNESS PUBLIC UTILITY DISTRICT DESIGNATING THE TIME AND PLACE FOR HOLDING REGULAR MEETINGS

**WHEREAS**, Section 54954 of Chapter 9, Division 2, Title 5 of the Government Code of the State of California, effective April 1, 1994, requires the legislative bodies of local agencies to declare by formal action the time and place for holding regular meetings,

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Inverness Public Utility District that its regular meetings shall be held at 12:00 p.m. on the third Tuesday of each month, except that if such a designated Tuesday of any month falls on a legal holiday, that month's regular meeting shall be held on the preceding Tuesday of that month unless scheduled otherwise by the Board of Directors.

**BE IT FURTHER RESOLVED** that the meetings of the Board of Directors of the Inverness Public Utility District shall be held at the Meeting Room in the Inverness Firehouse at 50 Inverness Way, Inverness, Marin County, California

**BE IT FURTHER RESOLVED** by the Board of Directors of the Inverness Public Utility District that all of its committees are advisory committees, that none of its committees has a fixed meeting schedule, and that none of its committees is empowered to take any action on behalf of the Board or the District or to act in any capacity except to make recommendations to the Board of Directors.

**PASSED AND ADOPTED** at a rescheduled regular meeting of the Board of Directors of the Inverness Public Utility District on the 19th day of November, 2023, by the following vote, to wit:

**AYES:**

**NOES:**

**ABSTAINING**:

**ABSENT**:

_____

Kathryn Donohue, President

ATTEST:

_____

Shelley Redding, Clerk of the Board

**********

*I hereby certify that the foregoing instrument is a true and correct copy of the original of Resolution 291-2024 on record in this office and that subsequent to its adoption no declaration contained in Resolution 291-2024 has been amended, modified, or revoked by the governing body.*

*By_____, Clerk of the Board, Inverness Public Utility District, County of Marin, State of California.*

*Signed_____ Date_____*

**Inverness Public Utility District**

*Fire Department* ~ *Water System*

Post Office Box 469

Inverness, CA 94937-0469

12781 Sir Francis Drake Blvd. ~ (415) 669-1414 ~ Fax (415) 669-1010 ~ admin@invernesspud.org

# NOTICE OF 2025 MEETING SCHEDULE

Notice is hereby given that the Regular Meetings of the Board of Directors of the Inverness Public Utility District for the year 2024 are scheduled for the following dates:

January 21
February 18
March 18
April 15
May 20
June 17
July 15
August 19
September 16
October 21
November 18
December 16

Note: All meetings are scheduled for the **third Tuesday** of the month. Meetings are held at the Inverness Firehouse, 50 Inverness Way North, Inverness, at **12:00 p.m**. Any changes from this schedule will be duly noticed.

ATTEST:

_____

Shelley L Redding, Clerk of the Board

Date:_____

Distribution:

Directors (5)
Staff (5)
Press (1)
Copies posted locally (3)
Copies available to the public (on request)

*Inverness Public Utility District*

# Board Agenda Item Staff Report

Subject: Policy Proposals for Section 115 Pension Prefunding Trust with CalPERS; establishing a District Policy for maintaining a funding percentage for both pension and other post-employment benefits; establishing an annual funding policy process.
Meeting Date: November 19, 2024
Date Prepared: October 17, 2024
Prepared by: Shelley Redding, General Manager
Attachments: CalPERS PowerPoint CEPPT Fund Presentation Documents; LAIF Annual Average Rate Document

==========

**Recommended Action: Review and discuss a proposed policy identifying the District funding obligations for both Pension and OPEB; proposed establishment and initial funding of the California Employer's Pension Prefunding Trust (CEPPT) with CalPERS; establishing a strategy for annual contributions to both CERBT and CEPPT.**

==========

**Background:**

The Inverness Public Utility District ("District") is a member of the California Public Employees' Retirement System ("CalPERS"), and as such, is obligated by the Public Employees' Retirement Law and the contract between the Board of Administration of CalPERS and the District to make contributions to CalPERS to (a) fund pension benefits for its employees who are members of CalPERS, (b) amortize a portion of the unfunded accrued liability (the "UAL") with respect to such pension benefits, and (c) appropriate funds for the purposes of paying for the pension benefits and such Unfunded Liability.

Under the CalPERS contract, the District is legally obligated to make certain payments to CalPERS in respect to current and retired public safety employees and miscellaneous employees under the associated pension plans that amortize the obligations over a fixed period, including normal costs. In addition to the normal pension cost, for many years, the District has made annual lump sum payments to CalPERS for its unfunded accrued liabilities (UAL). CalPERS's most recent valuation estimates that as of June 30, 2022, the District is 73.7% funded for Pension Plans. Whether that status will be maintained depends on the future performance of CalPERS investments. This current fiscal year, the UAL payments totaled $46,540 ($804 for PEPRA Miscellaneous, $179 for PEPRA Safety, $28,501 for Classic Miscellaneous and $17,056 for Classic Safety). The projection for the UAL payment is anticipated to increase annually by approximately 6.8%.[1]

As with the District's pre-funding investment into the California Employer's Retiree Benefit Trust (CERBT-OPEB), establishing a prefunding pension trust allows the District to grow assets towards future pension contributions, providing greater stability for budgeting purposes. Additionally, investing with a prefunding trust is likely to yield a greater rate of return than that offered by the Local Agency Investment Fund (LAIF), while maintaining the liquidity of the assets. Currently, the annual rate of return for LAIF in 2023-2024 was 3.927%[2]. The District CERBT fund (Strategy 2) shows a

[1] Page 19, CalPERS PowerPoint "CERBT Account Update
[2] LAIF Annual Rate

FYTD time weighted investment return rate of 5.57%[3]. For comparison, the CEPPT fund Strategy 1 shows an investment return rate of 5.19%, and the CEPPT fund Strategy 2 shows 4.63%[4].

After hearing a presentation from CalPERS representative Daniel Kaufman, staff decided to bring the information to the Board for consideration of the proposals and provide staff with direction on actions required to establish a section 115 pension prefunding policy CEPPT account for the District.

**Items for discussion:**

1) Adopt Board Policy regarding prefunding of both pension and post-employee benefits. The proposed policy provides Board guidance for both the District's current California Employers' Retiree Benefits Trust (CERBT) and the proposed California Employer's Pension Prefunding Trust (CEPPT).

    a. In practice, the CERBT Trust funding has maintained between 43% and 50% of the District's total accrued liability for retiree medical insurance in the CERBT trust. Staff recommends a policy to maintain a 50% funding goal for the trust. The policy would formalize the goals recommended by Staff that would be established by the Board.

    b. Staff proposes a policy to maintain a 75% pension funding goal and establish an amount equal to two years of annual pension contributions to CalPERS in the trust account as a reserve. In both cases, the amount held in trust (CERBT and CEPPT) are unlikely to be needed by the District any time in the next several years and we anticipate deposits in the trusts will be long-term investments. (Note that adoption of this policy requires renumbering a previous policy and this adjustment is reflected in the resolution).

2) Establishing A CEPPT Trust account, along with the existing CERBT Trust account, would require a review of the District's Investment Policy. This review would ensure that the actions of establishing section 115 prefunding trust accounts adhere to the District Investment Policy. For the CEPPT, it is not possible, or even desirable, to fully pre-fund the District's total accrued liability as the amount is substantial and changes depending on market results and actuarial assumptions.

3) Staff recommends that an annual report with both the investment performance of the Trust accounts and confirmation of the funding goals be provided to the Board with recommendations for either additional contributions to the Trust(s) or a withdrawal of funds to offset future expenditures for either OPEB or pension.

[3] Page 5, CalPERS PowerPoint "CERBT Account Update
[4] Page 9, CalPERS PowerPoint "CERBT Account Update

# California Employers Pension Prefunding Trust (CEPPT)





## Pension Cost Considerations & Outlook

### Cost Considerations

- **Normal Cost**
  - Ongoing perpetual cost
  - Naturally rises due to payroll & headcount
- **Unfunded Accrued Liability (UAL)**
  - Exists for most agencies
  - Will reoccur if plan is negative
  - 6.8% interest

### Outlook

- Fluctuating volatile costs
- Employers will need to budget more

## CalPERS Pension Fund Returns

| Period | Assets | Return |
|---|---|---|
| 30-year at 6/30/2023 | $440B | 7.5% |
| 20-year at 6/30/2023 | $440B | 7.0% |
| 10-year at 6/30/2023 | $440B | 7.1% |
| 5-year at 6/30/2023 | $440B | 6.1% |
| 2018 – 19 | $370B | 6.7% |
| 2019 – 20 | $389B | 4.7% |
| 2020 – 21 | $469B | 21.3% |
| 2021 – 22 | $440B | -7.5% |
| 2022 – 23 | $462B | 5.8% |





## District's CalPERS Pension Plans Summary

| Plan | Funded Status (6/30/2022) | Unfunded Liability (6.8% Interest) | UAL Payment 2024-25 | Normal Cost 2024-25 | Total Contribution 2024-25 |
|---|---|---|---|---|---|
| Miscellaneous | 73.2% | $368,704 | $28,501 | $4,624 | $33,125 |
| PEPRA Miscellaneous | 90.6% | $20,955 | $804 | $34,650 | $35,454 |
| PEPRA Safety Fire | 91.0% | $751 | $179 | $6,081 | $6,260 |
| Safety | 69.0% | $198,343 | $17,056 | $0 | $17,056 |
| **Totals** | **73.7%** | **$588,753** | **$46,540** | **$45,355** | **$91,895** |

## Consider All CalPERS Tools for Optimum Results

- July UAL Annual Prepayment
- "Fresh Start" Re-amortization Schedule
- ADP (Additional Discretionary Payment)
- CEPPT Sec 115 Prefunding Trust





## July UAL Prepayment

### Required Contributions

| Required Employer Contributions | Fiscal Year 2024-25 |
|---|---|
| Employer Normal Cost Rate | 10.15% |
| *Plus* | |
| Required Payment on Amortization Bases[1] | $28,501 |
| *Paid either as* | |
| 1) Monthly Payment | $2,375.08 |
| *Or* | |
| 2) Annual Prepayment Option* | $27,579 |

*The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).*

** Only the UAL portion of the employer contribution can be prepaid **(which must be received in full no later than July 31)**.*

# UAL Fresh Start Program

| | Current Amortization Schedule | | Alternate Schedules | | | |
|---|---|---|---|---|---|---|
| | | | 15 Year Amortization | | 10 Year Amortization | |
| Date | Balance | Payment | Balance | Payment | Balance | Payment |
| 6/30/2024 | 372,299 | 28,501 | 372,299 | 39,056 | 372,299 | 50,819 |
| 6/30/2025 | 368,161 | 31,128 | 357,253 | 39,055 | 345,097 | 50,819 |
| 6/30/2026 | 361,023 | 33,666 | 341,185 | 39,055 | 316,045 | 50,818 |
| 6/30/2027 | 350,784 | 35,672 | 324,025 | 39,056 | 285,019 | 50,819 |
| 6/30/2028 | 337,775 | 40,295 | 305,697 | 39,056 | 251,882 | 50,819 |
| 6/30/2029 | 319,101 | 41,075 | 286,122 | 39,055 | 216,492 | 50,819 |
| 6/30/2030 | 298,351 | 41,870 | 265,217 | 39,056 | 178,695 | 50,818 |
| 6/30/2031 | 275,369 | 42,694 | 242,890 | 39,055 | 138,329 | 50,819 |
| 6/30/2032 | 249,974 | 42,142 | 219,045 | 39,055 | 95,217 | 50,818 |
| 6/30/2033 | 223,424 | 37,362 | 193,579 | 39,056 | 49,174 | 50,818 |
| 6/30/2034 | 200,005 | 35,994 | 166,380 | 39,055 | | |
| 6/30/2035 | 176,406 | 33,855 | 137,333 | 39,056 | | |
| 6/30/2036 | 153,412 | 30,210 | 106,310 | 39,056 | | |
| 6/30/2037 | 132,621 | 27,949 | 73,177 | 39,055 | | |
| 6/30/2038 | 112,756 | 25,545 | 37,792 | 39,056 | | |
| 6/30/2039 | 94,022 | 23,668 | | | | |
| 6/30/2040 | 75,955 | 22,447 | | | | |
| 6/30/2041 | 57,922 | 19,264 | | | | |
| 6/30/2042 | 41,952 | 15,830 | | | | |
| 6/30/2043 | 28,444 | 27,283 | | | | |
| 6/30/2044 | 2,182 | 2,255 | | | | |
| 6/30/2045 | | | | | | |
| 6/30/2046 | | | | | | |
| 6/30/2047 | | | | | | |
| 6/30/2048 | | | | | | |
| 6/30/2049 | | | | | | |
| Total | | 638,705 | | 585,833 | | 508,186 |
| Interest Paid | | 266,406 | | 213,534 | | 135,887 |
| Estimated Savings | | | | 52,872 | | 130,519 |





# Tools to Proactively Manage Pension Costs

## ADP (Additional Discretionary Payment)

- Makes up past underperformance
- Reduces pension UAL
- Liquidity consideration

## CEPPT Sec 115 Trust

- Stabilizes future cash flow
- Improves future capacity to pay

# Pension Contribution Investment Tools

| Portfolios | CalPERS Pension | CEPPT Strategy 1 | CEPPT Strategy 2 | LAIF |
|---|---|---|---|---|
| Expected Return | 6.8% | 5.4% | 4.9% | ~1% |
| Risk | 11.4% | 8.4% | 5.9% | Lowest |
| Time Horizon | Longest Term | Employer Determined | | Shortest Term |
| Liquidity | No | Yes | | Yes |



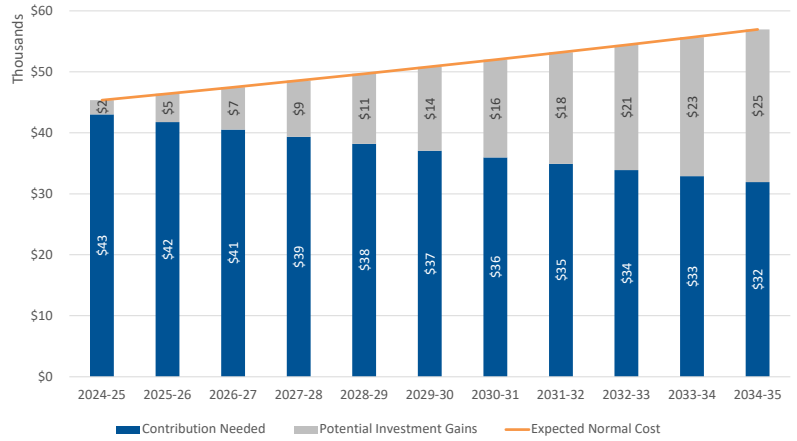


# Higher Yielding Investment Potential

## Hypothetical 10 Year Compounding Interest Scenario

| Investment Duration (Years) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Expected Compounded Annualized Rate of Investment Return | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% | 5.4% |
| Cumulative Expected Compounded Rate of Investment Return | 5% | 11% | 17% | 23% | 30% | 37% | 45% | 52% | 61% | 69% |
| Future Value of $1 | $1.05 | $1.11 | $1.17 | $1.23 | $1.30 | $1.37 | $1.45 | $1.52 | $1.61 | $1.69 |
| Required Investment Principal Contribution Needed to Generate $1M | $949K | $900K | $854K | $810K | $769K | $729K | $692K | $657K | $623K | $591K |

## Hypothetical Contribution Prefunding Scenario – Estimated Normal Cost








## Rainy Day Fund

- Will likely outperform LAIF and earn more interest over time
- Will provide additional income source allowing for greater budgetary stability

| Plan | 3 Months Pension Cost |
|---|---|
| Miscellaneous | $8,281 |
| PEPRA Miscellaneous | $8,864 |
| PEPRA Safety Fire | $1,565 |
| Safety | $4,264 |
| **Total** | **$22,974** |

## Maintain Local Control

- Choose your preferred portfolio or use both concurrently
- Contributions are voluntary and on your schedule
- Decide if, and when to liquidate trust assets
  - Normal costs, UAL payments, ADPs





## CEPPT Portfolio Options

| Portfolios | CEPPT Strategy 1 | CEPPT Strategy 2 |
|---|---|---|
| Expected Return | 5.4% | 4.9% |
| Standard Deviation | 8.4% | 5.9% |

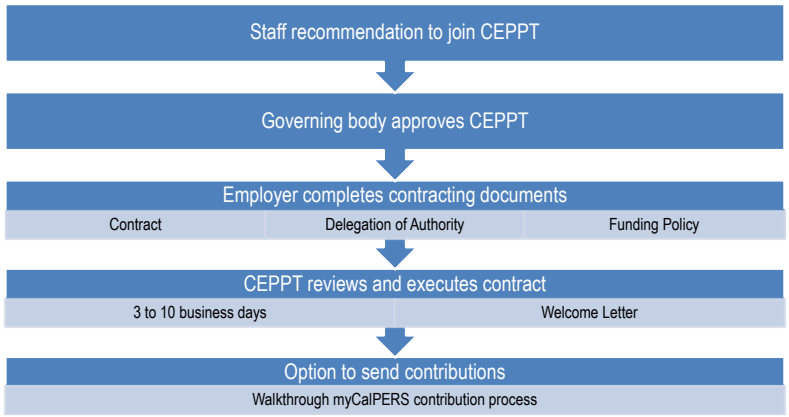
# CEPPT Portfolio Details

| Asset Classification | Benchmark | CEPPT Pension Strategy 1 | CEPPT Pension Strategy 2 | Target Range |
|---|---|---|---|---|
| Global Equity | MSCI All Country World Index IMI (Net) | 37% | 21% | ±5% |
| Fixed Income | Bloomberg US Aggregate Bond Index | 44% | 61% | ±5% |
| Real Estate Investment Trusts ("REITs") | FTSE EPRA/NAREIT Developed Index (Net) | 14% | 9% | ±5% |
| Treasury Inflation Protected Securities (TIPS) | Bloomberg US TIPS Index, Series L | 5% | 9% | ±3% |
| Cash | 91-Day Treasury Bill | - | - | +2% |





# Uncomplicated Contracting Process



# Next Steps

| Continue Pay-As-You-Go Option | Setup CEPPT Option |
|---|---|
| ▪ Most expensive approach | ✓ Higher investment income than LAIF/Treasury |
| ▪ Rely 100% on current & future operating budget | ✓ Stabilize future cash flow & reduce budget dependency |
| ▪ Increasing pension costs may stress future budget | ✓ Rainy day fund |
| | ✓ Voluntary contributions & retain liquidity |





# Questions? Where to Get Trust Fund Information?

| Name | Title | E-mail | Desk | Mobile |
|---|---|---|---|---|
| Darren Lathrop | Outreach & Support Manager | Darren.Lathrop@calpers.ca.gov | (916) 795-0751 | (916) 291-0391 |
| Lee Lo | Section 115 Trust and 457 Outreach Manager | Lee.Lo@calpers.ca.gov | (916) 795-4034 | (916) 612-4128 |
| Therese Luo | Outreach & Support Analyst | Therese.Luo@calpers.ca.gov | (916) 795-2983 | (916) 213-2879 |
| Danny Kaufman | Outreach & Support Analyst | Daniel.Kaufman@calpers.ca.gov | (916) 795-8278 | (916) 440-3821 |
| Katie Nguyen | Outreach & Support Analyst | Katie.Nguyen@calpers.ca.gov | (916) 795-8248 | (916) 715-1911 |
| Colleen Cain-Herrback | Program Manager | Colleen.Cain-Herrback@calpers.ca.gov | (916) 795-2474 | (916) 505-2506 |
| Robert Sharp | Assistant Division Chief | Robert.Sharp@calpers.ca.gov | (916) 795-3878 | (916) 397-0756 |

| Program E-mail Addresses | Prefunding Programs Webpages |
|---|---|
| CEPPT4U@calpers.ca.gov – Questions & Document Submittal | www.calpers.ca.gov/ceppt |
| CERBT4U@calpers.ca.gov - Questions & Document Submittal | www.calpers.ca.gov/cerbt |
| CERBTACCOUNT@calpers.ca.gov – Access to Online Record Keeping System | www.your-fundaccount.com/calpers/ - Online Record Keeping System |

LOCAL AGENCY INVESTMENT FUND

# Average Annual Yields

| Fiscal Year | Rates |
|---|---|
| 71/72 | 4.880 |
| 72/73 | 5.550 |
| 73/74 | 8.970 |
| 74/75 | 8.620 |
| 75/76 | 6.370 |
| 76/77 | 5.870 |
| 77/78 | 6.700 |
| 78/79 | 8.520 |
| 79/80 | 10.540 |
| 80/81 | 10.780 |
| 81/82 | 12.070 |
| 82/83 | 10.450 |
| 83/84 | 10.408 |
| 84/85 | 10.715 |
| 85/86 | 9.081 |
| 86/87 | 7.435 |
| 87/88 | 7.874 |
| 88/89 | 8.669 |
| 89/90 | 8.655 |
| 90/91 | 8.013 |
| 91/92 | 6.196 |

| Fiscal Year | Rates |
|---|---|
| 92/93 | 4.707 |
| 93/94 | 4.387 |
| 94/95 | 5.532 |
| 95/96 | 5.706 |
| 96/97 | 5.599 |
| 97/98 | 5.699 |
| 98/99 | 5.344 |
| 99/00 | 5.708 |
| 00/01 | 6.104 |
| 01/02 | 3.445 |
| 02/03 | 2.152 |
| 03/04 | 1.532 |
| 04/05 | 2.256 |
| 05/06 | 3.873 |
| 06/07 | 5.121 |
| 07/08 | 4.325 |
| 08/09 | 2.224 |
| 09/10 | 0.651 |
| 10/11 | 0.495 |
| 11/12 | 0.382 |
| 12/13 | 0.307 |

| Fiscal Year | Rates |
|---|---|
| 13/14 | 0.249 |
| 14/15 | 0.269 |
| 15/16 | 0.434 |
| 16/17 | 0.754 |
| 17/18 | 1.376 |
| 18/19 | 2.266 |
| 19/20 | 1.934 |
| 20/21 | 0.500 |
| 21/22 | 0.371 |
| 22/23 | 2.170 |
| 23/24 | 3.927 |

Inverness Public Utility District
Board Meeting

# Agenda Item No. 07

## Committee Meetings/Reports

Inverness Public Utility District
Board Meeting

# Agenda Item No. 8

## Adjournment