

ATTACHMENT 1c

Aldebaran's Gaze Full Resubmittal

APPLICATION PACKET CHECKLIST

Please check below to ensure you have a complete application. Once complete, email the following documents, in pdf format with the text "Application for Remediation Grant Program Funding" in the subject line to mrichardson@co.humboldt.ca.us.

- X Signed Application Submission Form
- X Project Description – Summary of the Project, up to 2 pages.
- X Plot Plan
- X Plot Plan Checklist – Attached
- X Cross sections of proposed work including topographic elevations
- X Scope of Work – Detailed Description of Work
- X Schedule for Completion – Identify Milestones
- X Erosion Control Plan and Monitoring Plan
- X Budget – Be as specific as possible – sample attached
- X Project Maps and Figures
- ☐ Letter(s) of Support (optional)

APPLICATION FORM - Commercial Cannabis Land Use Ordinance Mitigation and Remediation Fund Program

Project Title: Aldebaran's Gaze Remediation Date of Application: 10/31/2022

Applicant Name: Aldebaran's Gaze, LLC

Project APN: 223-091-003

Contact Person Name and Title: Bryan Harpel, Managing Member

Contact Phone: (707) 407-5038

Contact Email: harpelharp@gmail.com

Contact Address: P.O. Box 415, Garberville, CA 95542

Amount Requested: \$17,040.00

Total Budget: \$26,002.45

Project Timeline: Start Date: 01/01/2023

End Date: 08/01/2023

Signature of Applicant: 

Project: Aldebaran's Gaze Remediation

Applicant: Aldebaran's Gaze, LLC

Contact: Bryan Harpel

APN: 223-091-003

Grant Funding Requested: \$17,040.00

Project Description

The project is located on Humboldt County APN 223-091-003 near Garberville, California. The property is located on Ross Road, in the Eel River watershed, approximately eight miles east of Garberville.

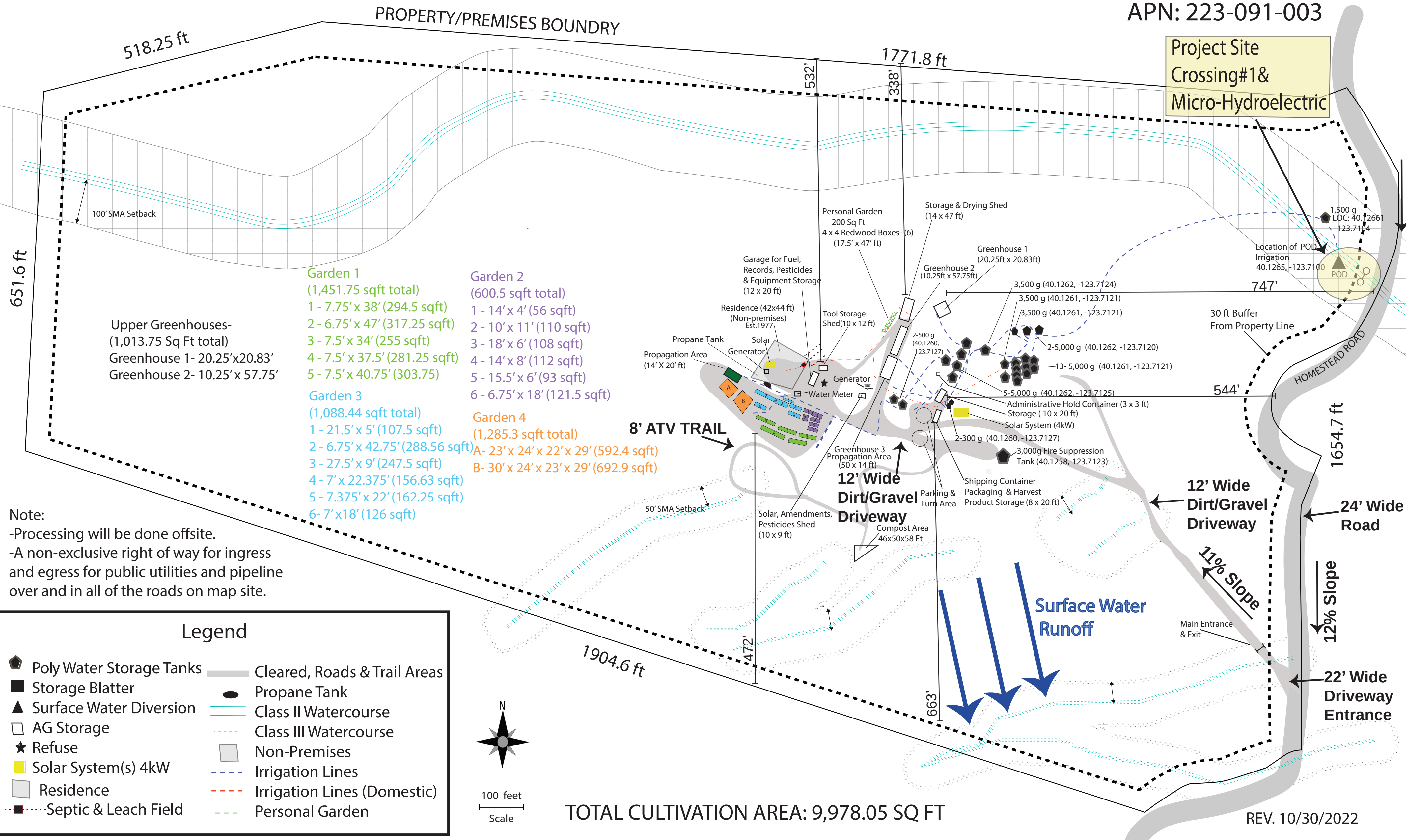
The project proposes the upgrade of an undersized culvert along with removal of legacy hydroelectric facility infrastructure at one stream crossing as required by the applicant's Lake and Streambed Alteration Agreement with the California Department of Fish & Wildlife.

While the Humboldt GIS indicates the parcels are in a general area of high slope instability, they are not within a flood hazard zone, nor in an earthquake hazard zone. The parcels are surrounded by rural improved properties. No impact to these other parcels is expected.

This project would storm-proof the stream crossing for a 100 year flood event and reduce the potential for road-related sediment delivery into the unnamed tributary and down to the south fork of the Eel River. The upgraded stream crossing will protect water quality and aquatic ecosystems, limiting the impact on downstream resources. The crossing upgrade will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads" (Weaver, Weppner and Hagans, 2015), and the California Salmonid Stream Habitat Manual, Part X (Weaver, Hagans and Weppner, 2006) by a licensed contractor.

Permanent impacts to existing native channel bed, channel, watercourse banks, and associated riparian habitat will be negligible and avoided. Incidental destruction of small areas of riparian habitat growing on existing road fill or in disturbed channel areas is expected but will be minimized at the proposed sites during remediation. No loss of trees is expected.

Project Site
Crossing#1&
Micro-Hydroelectric



Note:
-Processing will be done offsite.
-A non-exclusive right of way for ingress and egress for public utilities and pipeline over and in all of the roads on map site.

Legend

	Poly Water Storage Tanks		Cleared, Roads & Trail Areas
	Storage Blatter		Propane Tank
	Surface Water Diversion		Class II Watercourse
	AG Storage		Class III Watercourse
	Refuse		Non-Premises
	Solar System(s) 4kW		Irrigation Lines
	Residence		Irrigation Lines (Domestic)
	Septic & Leach Field		Personal Garden

TOTAL CULTIVATION AREA: 9,978.05 SQ FT

PLOT PLAN AND TENTATIVE MAP CHECKLIST

The following information must be shown on your plot plan or tentative map. Please check ✓ the box to the left of the items shown on the plot plan or tentative map. If any item is not on your site to your knowledge, write "N/A" next to the box. Plot plans shall be drawn on a minimum size sheet of 8-1/2" x 11", and tentative subdivision maps on a minimum size sheet of 18" x 26". **Note: This Checklist must be completed by the applicant and submitted with your application.**

Applicant's Name Aldebaran's Gaze Remediation APN 223-091-003

FOR ALL PROJECTS

- ☒ 1. Name of applicant(s)
- ☒ 2. Location or vicinity map (on or attached to the plot plan)
- ☒ 3. The subject parcel (show entire parcel with dimensions)
- ☒ 4. Date, north arrow and scale
- ☒ 5. Name, County road numbers, and width of all existing and proposed access roadways adjacent to or within the subject parcel (indicate width of traveled way, grade (in % slope), and surface)
- ☒ 6. Existing and proposed improvements (label as "existing" and "proposed" with dimensions and distance to nearest two (2) property lines)

☒ a. Structures and buildings (include floor area, height and proposed use)

☒ b. Driveways and turnaround areas (indicate width, grade (in % slope) and surface)

N/A☐ c. Utility lines (electric, gas, telephone, sewer, water, and cable TV)

☒ d. Septic tanks and leachfields (label primary/reserve areas and test holes)

N/A☐ e. Wells

☒ f. Parking and loading areas (show individual parking spaces, including handicapped parking and ramps)

N/A☐ g. Storm drains, curbs and gutters

☒ h. Emergency water storage tanks and fire hydrants

N/A☐ i. Landscaped areas (include proposed exterior lighting)

N/A☐ j. Major vegetation (identify mature trees (12" dbh or larger) to be removed)

N/A☐ k. Diked areas

N/A☐ l. Proposed grading and fill (estimate volume)

N/A☐ m. Signs (indicate size, illuminated, and design (e.g., monument, pylon, etc.))

N/A☐ n. Other - specify _____

☒ 7. Direction of surface water runoff

☒ 8. Location and width of all existing and proposed easements of record

☐ N/A 9. Hazardous areas (indicate on map if on the project site or within 400 feet of the project site):

N/A☐ a. Areas subject to inundation or flooding

N/A☐ b. Steep or unstable slopes

N/A☐ c. Expansive (clay) soils

N/A☐ d. Earthquake faults

N/A☐ e. Hazardous waste or substance sites

N/A☐ f. Other - specify _____

☒ 10. Sensitive habitat areas (indicate on map if on project site or within 400 feet of the project site):

☒ a. Creeks, rivers, sloughs and other drainage courses

N/A☐ b. Lakes, ponds, marshes, or "wet" meadows

N/A☐ c. Beaches

N/A☐ d. Sand dunes

N/A☐ e. Other - specify _____

☐ N/A 11. Historical buildings or known archaeological or paleontological resources

☒ 12. Land use and buildings on adjacent parcels, and approximate distances to closest property lines

FOR LOT LINE ADJUSTMENT PLOT PLANS ONLY

☐ N/A 13. Proposed new lines and lines to be eliminated (show lines to be eliminated as dashed)

☐ N/A 14. Areas (in square footage or acreage) of the initial and resulting parcels

FOR TENTATIVE SUBDIVISION MAPS ONLY

☐ N/A 16. Approximate dimensions and areas of all proposed lots

☐ N/A 17. A statement that "All easements of record are shown on the tentative map and will appear on the recorded subdivision map"

☐ N/A 18. Contour lines (at _____ intervals)

☐ N/A 19. For major subdivisions (5 or more parcels): proposed drainage improvements, details of any grading to be performed, approximate radii of all roadway curves, areas for public use, and typical sections of all streets, highways, ways and alleys

☐ N/A 20. Names and assessor's parcel numbers of all contiguous ownerships

NOTE: THE SUBMITTAL OF INCOMPLETE OR ILLEGIBLE PLOT PLANS OR TENTATIVE MAPS WILL CAUSE DELAYS IN THE PROCESSING OF YOUR APPLICATION

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(Revised 10/20/94)

Project: Aldebaran's Gaze Remediation

Applicant: Aldebaran's Gaze, LLC

Contact: Bryan Harpel

APN: 223-091-003

Grant Funding Requested: \$17,040.00

Scope of Work

The project is for the upgrade of one non-compliant stream crossing along with the removal of legacy micro-hydroelectric infrastructure debris. The scope of work is described in the applicant's LSA agreement with Fish & Wildlife, and is summarized as follows:

Crossing 1: Replace undersized (short) 48" diameter by 20' culvert with a new 48" diameter by 30' long culvert. Remove micro-hydroelectric facility debris and restore channel/banks to natural condition. Debris will be properly disposed of at a local waste facility.

The project will require a new culvert and a supply of rock and related materials for rip rap to stabilize the channel. Estimated completion of the project will require 16 hours of excavation, 8 hours of labor, and 6 hours of machine transport. The work requires heavy equipment and will be completed by Eel River Excavation.

Prior to starting project operations, the applicant will work with Timberland Resource Consultants to obtain a 401 certification permit for the work.

Margro Advisors will work with the applicant on maintaining compliance with local and State regulations, and provide support for the project's grant administration and reporting, as needed.

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Mitigation and Remediation Fund Schedule for Completion

Milestone	Start Date	End Date
Detailed Project Design	January 1, 2023	February 1, 2023
Permitting	February 1, 2023	May 1, 2023
Final Bidding and Contracting	May 1, 2023	May 31, 2023
Project Ground-Breaking	June 1, 2023	
Project Completion		August 1, 2023
Monitoring	August 1, 2023	Ongoing

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Erosion Control and Monitoring Plan

To protect nearby watershed areas and nearby habitat the site is managed to meet standard conditions and follow best practices in accordance with guidelines provided by the North Coast Regional Water Quality Control Board (NCRWQCB). These practices address erosion control and drainage features, spoils management, water storage and use, irrigation runoff, fertilizers and pesticides, and stream and wetland buffers when applicable.

Best practice steps for this site can include:

- Moderate road shaping and ditch-relief used to optimize drainage to stable areas
- Out-sloping maintained to ensure proper capture and capacity of seasonal flow
- Usage of vegetative ground cover and gravel for added sediment control
- Application of straw mulch to exposed soils to minimize erosion
- Careful irrigation, with immediate oversight, to reduce the possibility of irrigation runoff

Applicant will maintain driveways and access roads to eliminate erosion or runoff during storms. Prior to the winter season and significant storm events, roads and cultivation sites will be inspected and monitored to ensure that runoff is prevented. Culverts will be inspected to ensure armoring is maintained and any debris or sediment has been removed..

If potential issues are discovered during or immediately following a storm event, they will be corrected as soon as possible to ensure minimal impact and prevent sediment flow in the future. This will include proper ditching and vegetation buffers, and as needed, straw, seed, wattles, jute cloth, riprap, or other industry standards used to prevent and eliminate runoff.

Project: Aldebaran's Gaze Remediation

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Grant Funding Requested: \$17,040.00

Total Budget: \$26,002.45

Project Budget

Item	Grant Funds	Other Funds (Source)
<i>Permit Fees</i>		
CDFW LSA Agreement		\$5,888.45 (Applicant)
SWRCB 401 Certification	\$2,417.00	
<i>Consultant and Professional Fees</i>		
Timberland Resource Consultants		\$2,500.00 (Applicant)
Margro Advisors	\$423.00	\$574.00 (Applicant)
<i>Materials, Equipment and Labor*</i>		
Eel River Excavation	\$14,200.00	
Totals	\$17,040.00	\$8,962.45

*See attached bid

EEL RIVER EXCAVATION

3450 upper sawmill rd

City- Garberville

State- ca

Zip code- 95542

Tel.707-672-4818

Estimate # 1

DATE. 10/26/2022

SOLD TO. Aldebarans Gaze LLC

Bryan harpel

Project notes - replace 48" culvert

DESCRIPTION	Quantity	Rate	AMOUNT
Rock and Rip Rap	2	1000	\$2000
Machines hours -30,000#Excavator	16 hours	275	\$4400
Culvert pipe	2	3000	\$6000
Machine Transport	6 hr	200	\$ 1200
Man hours 1 Person	8 hr	50	\$ 400
TOTAL			\$14,200

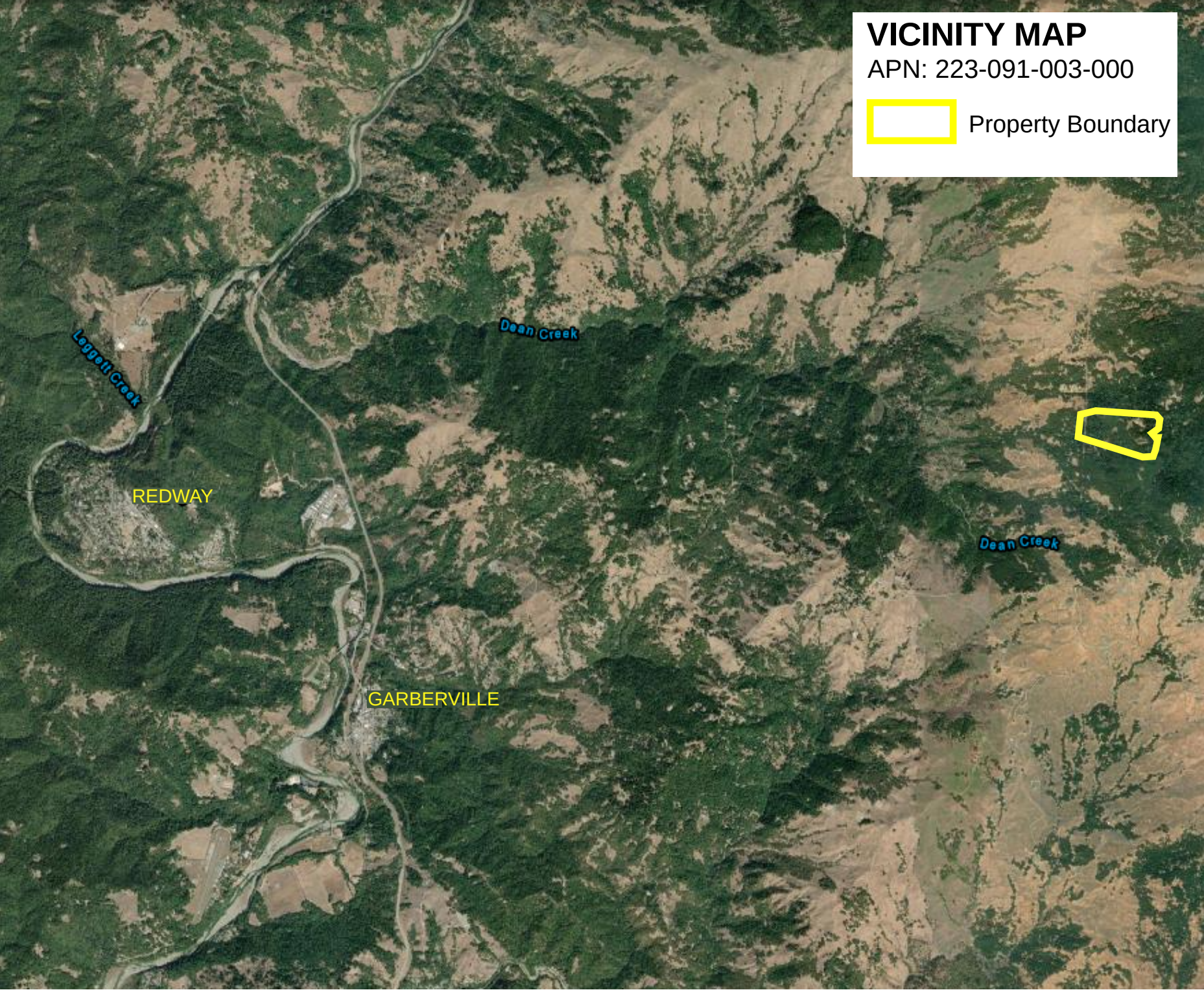


Figure 1 - Vicinity Map



Harpel Topo Map

Humboldt County Planning and Building Department

Printed: October 25, 2022

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

Highways and Roads

Principal Arterials

Minor Arterials

Major Collectors

Minor Collectors

Local Roads

Private or Unclassified

Major River or Stream

Blue Line Streams

Perennial 1-3

Perennial >4

Intermittent

Subsurface

City Boundary

Counties

Parcels (no APN labels)

Topographic Contours 40ft

Minor Interval

Major Interval

0 180 360 720 Feet

0 0.0325 0.065 0.13 Miles

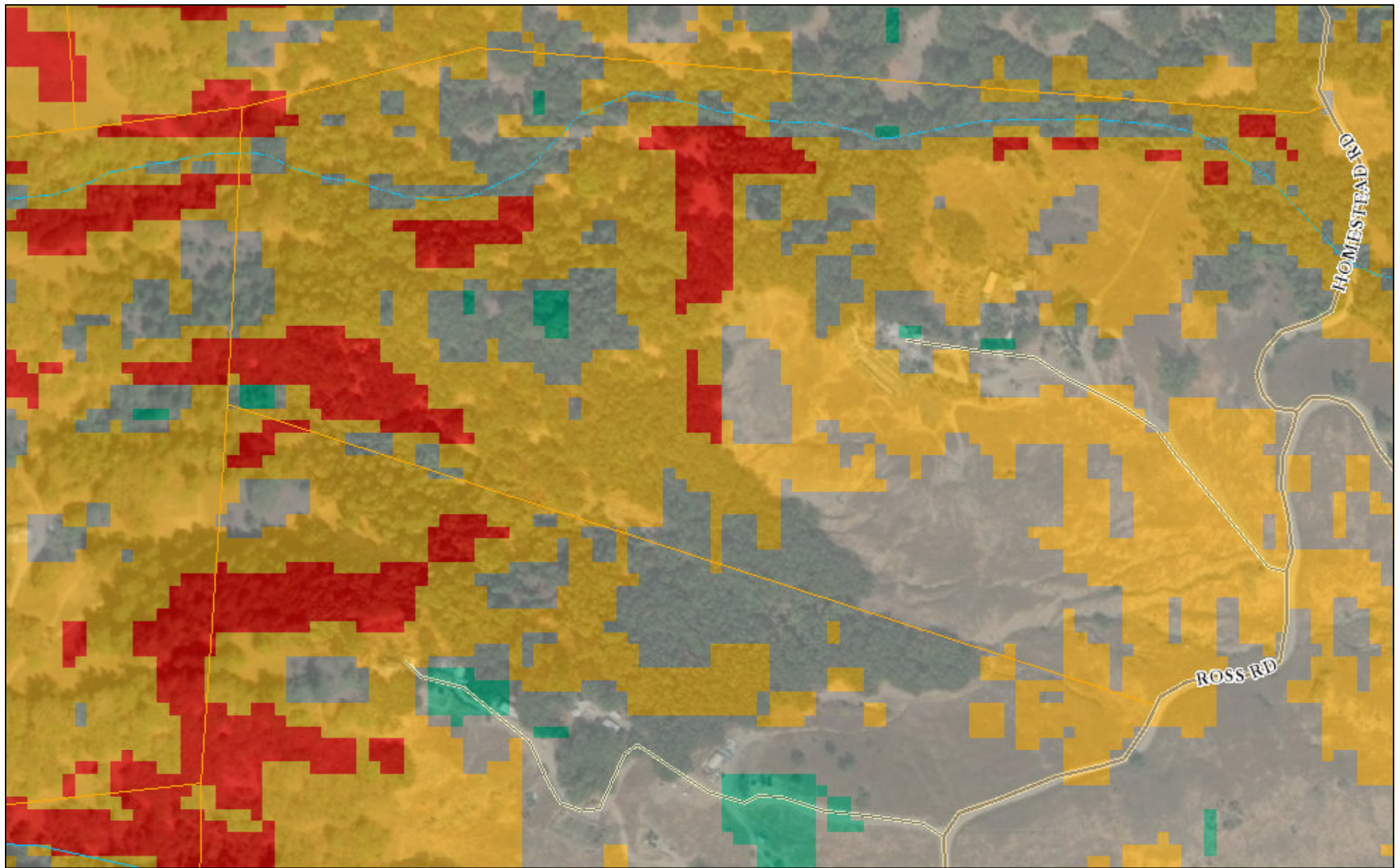
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1 in = 376 ft



Sources: Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
FRAP, FEMA, USGS, ESA, CGS
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Figure 2 - Topo Map



Harpel Slope Map

Humboldt County Planning and Building Department

Printed: October 25, 2022

Web AppBuilder 2.0 for ArcGIS

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Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

Blue Line Streams

- Perennial 1-3
- Perennial >4
- Intermittent

Private or Unclassified

- Subsurface
- Major River or Stream

City Boundary

- Counties

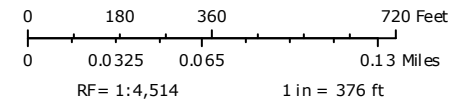
Parcels (no APN labels)

Slope USGS

- 15-30%

Slope less than 15%

- 30 - 50%
- >50%
- <15%



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Figure 3 - Slope Map

Cofferdam Construction and Use Specifications

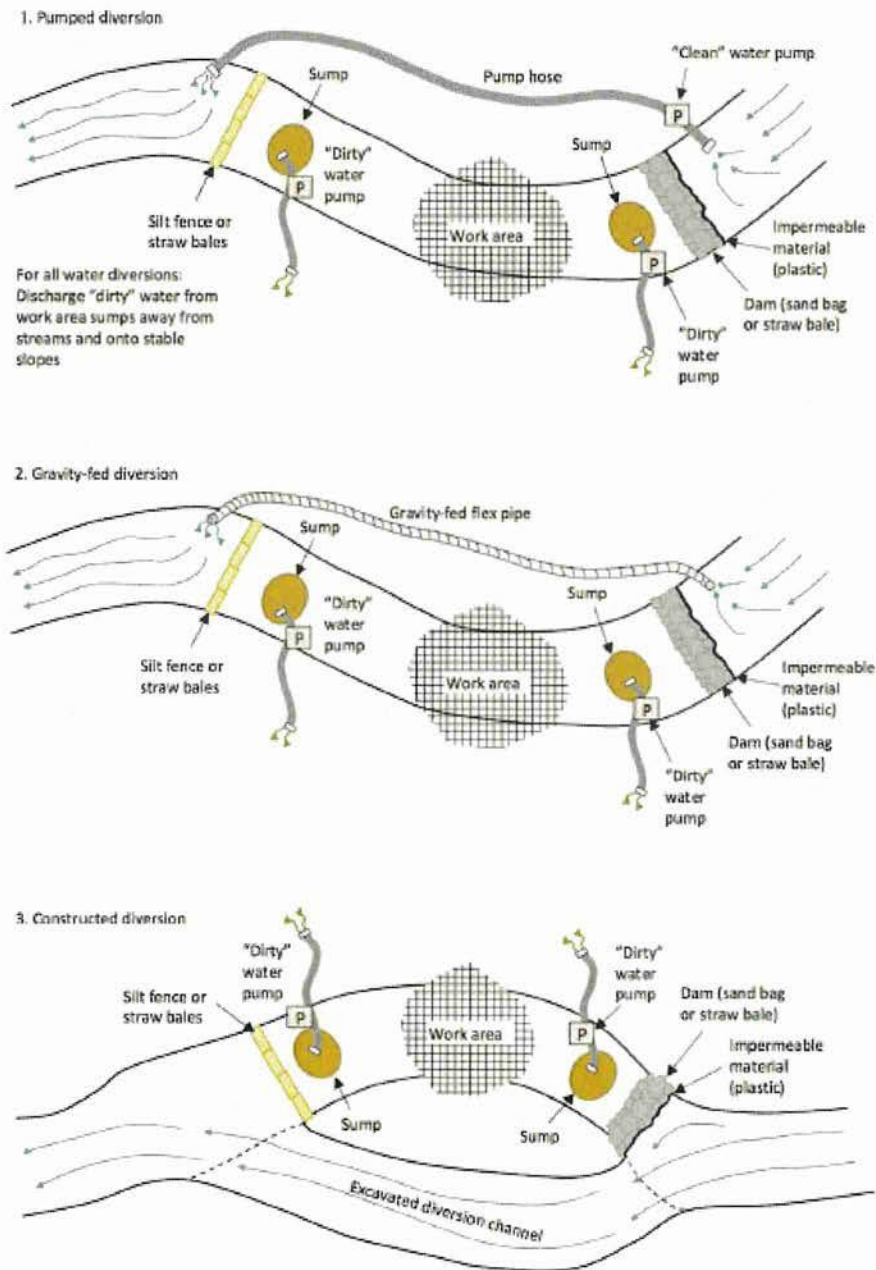


Figure 4A - Cofferdam Specifications

Cofferdam Construction and Use Specifications



FIGURE 197. Flex pipe stream diversion around a road construction site. The inlet to this 6 inch diameter flex pipe inlet collects clear streamflow from a retention dam above the project site and gravity feeds it around the project area and back into the natural channel downstream from construction work (see photo).



FIGURE 198. Sand bag retention dam on this small stream was used to pond streamflow so it could be pumped around a culvert installation site. The green intake hose is screened to keep out rocks and debris while the red pump hose extends several hundred feet around the project work area.



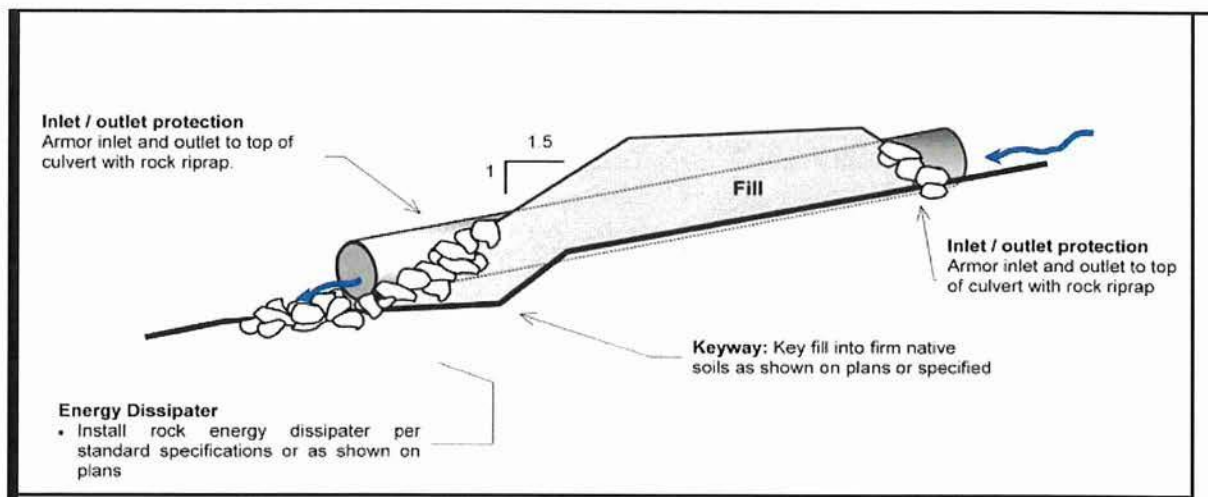
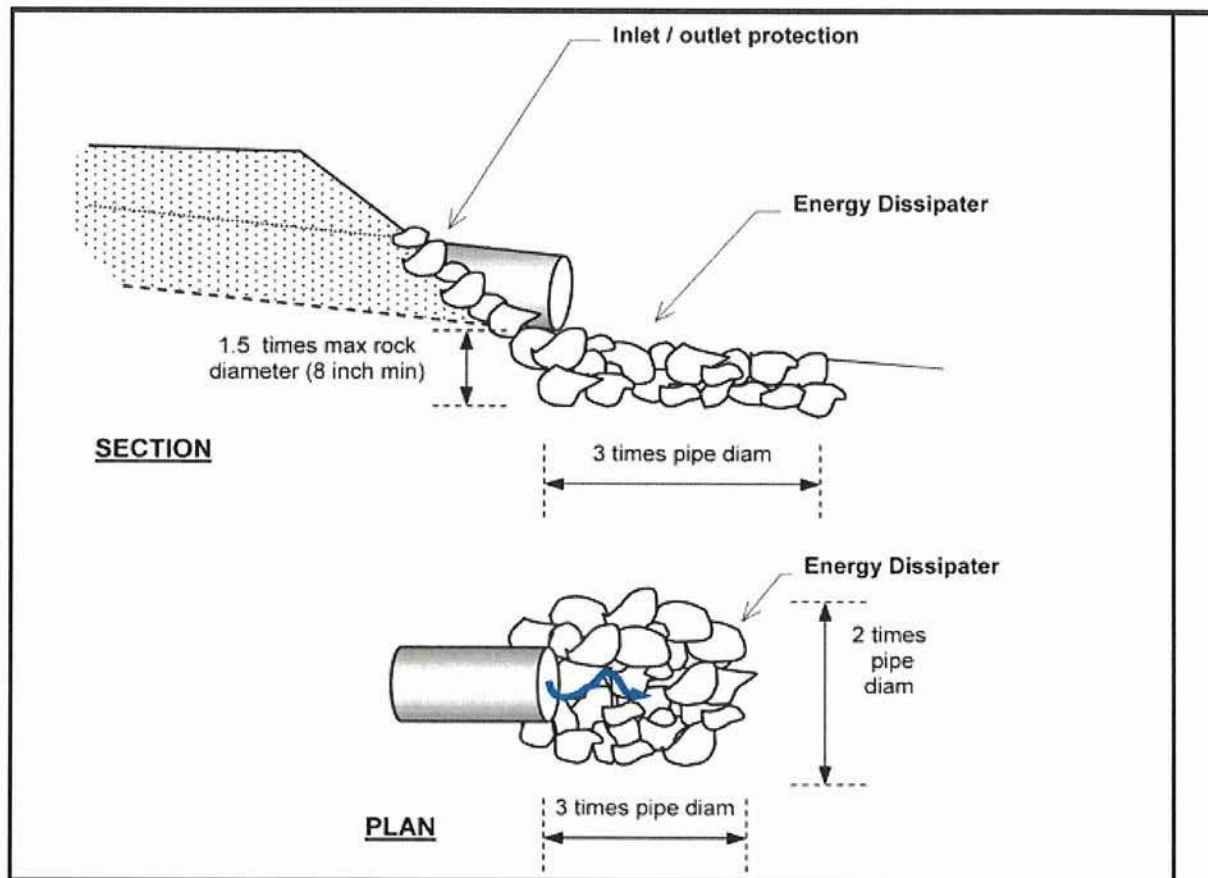
FIGURE 199. For larger streams, pump trucks, large pumps or multiple small pumps can be used to pump streamflow around project work sites. Here, a pump truck is used to temporarily divert flow in a fish bearing stream where dual culverts are being replaced with a rsilcar bridge. Young fish were removed from this fish bearing stream before project work started.

Culvert Installation Specifications

- New culvert installations shall be sized to accommodate a 100-year storm.
- New culverts shall be placed at stream gradient, or have downspouts, or have energy dissipaters at outfall.
 - Align culverts with the natural stream channel orientation to ensure proper function, prevent bank erosion and minimize debris plugging.
 - Place culverts at the base of the fill and at the grade of the original streambed or install a downspout past the base of the fill. Downspouts should only be installed if there are no other options.
 - Culverts should be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
 - Culvert beds should be composed of rock-free soil or gravel, evenly distributed under the length of the pipe.
 - Compact the base and sidewall material before placing the pipe in its bed.
 - Lay the pipe on a well-compacted base. Poor basal compaction will cause settling or deflection in the pipe and can result in separation at a coupling or rupture in the pipe wall.
 - Backfill material should be free of rocks, limbs or other debris that could dent or puncture the pipe or allow water to seep around the pipe.
 - Cover one end of the culvert pipe, then the other end. Once the ends are secure, cover the center.
 - Tamp and compact backfill material throughout the entire process, using water as necessary for compaction.
 - Backfill compacting will be done in 0.5 – 1.0 foot lifts until 1/3 of the diameter of the culvert has been covered.
 - Push layers of fill over the crossing to achieve the final design road grade, at a minimum of one-third to one-half the culvert diameter.
- Critical dips shall be installed on culvert crossings to eliminate diversion potential.
- Road approaches to crossings shall be treated out to the first drainage structure (i.e. waterbar) or hydrologic divide to prevent transport of sediment.
- Road surfaces and ditches shall be disconnected from streams and stream crossings to the greatest extent feasible. Ditches and road surfaces that cannot be feasibly disconnected from streams or stream crossings shall be treated to reduce sediment transport to streams.
- If downspouts are used, they shall be secured to the culvert outlet and shall be secure on fill slopes.
- Culverts shall be long enough so that road fill does not extend or slough past the culvert ends.
- Inlet of culverts and associated fill shall be protected with appropriate measures that extend at least as high as the top of the culvert.
- Outlet of culverts shall be armored with rock if road fill sloughing into channel can occur.
- Armor inlets and outlets with rock, or mulch and seed with grass as needed (not all stream crossings need to be armored).
- Where debris loads could endanger the crossing a debris catchment structure shall be constructed upstream of the culvert inlet.
- Bank and channel armoring may occur when appropriate to provide channel and bank stabilization.

Figure 5A - Culvert Specifications

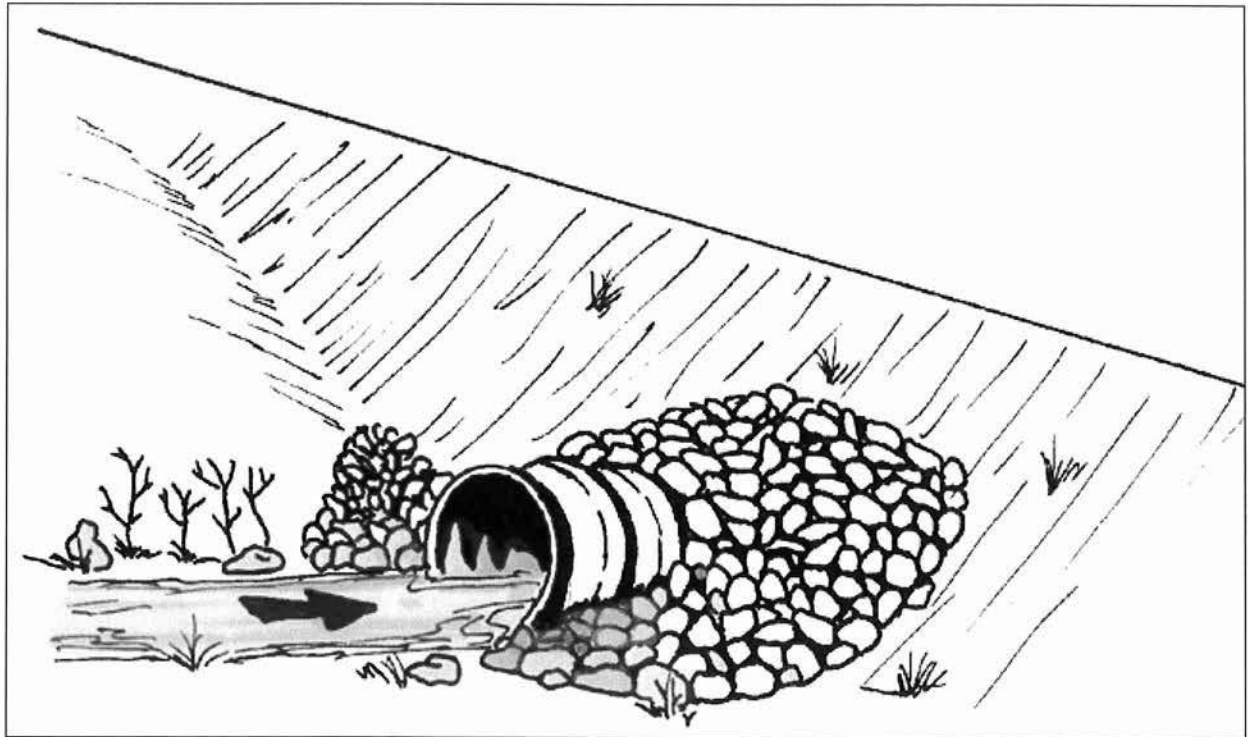
Culvert Installation Specifications



Riprap installed to protect the inlet and outlet of a stream crossing culvert from erosion or for energy dissipation should be keyed into the natural channel bed and banks to an approximate depth of about 1.5x the maximum rock thickness. Riprap should be placed at least up to the top of the culvert at both the inlet and outlet to protect them from splash erosion and to trap any sediment eroded from the newly constructed fill slope above.

Figure 5B - Culvert Specifications

Culvert Installation Specifications



Rock armor used for inlet and outlet protection (i.e., not as energy dissipation) does not have to be sized to protect against high velocity scour. If the culvert is properly sized and its length is adequate, it should be able to transmit flood flows without scouring the inlet or eroding the outlet around the culvert. Armor shown here is designed to protect the culvert outlet and basal fill from splash erosion and from occasional submergence and currents within standing water (at the inlet) when the culvert plugs. Importantly, inlet and outlet armor also serves to trap sediment that has been eroded or slides down the new constructed fill face in its first several years, until the slope becomes well vegetated.

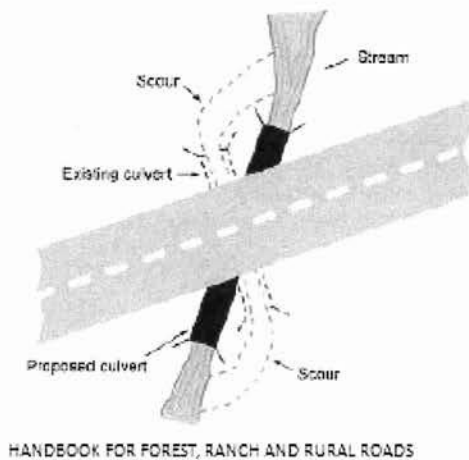
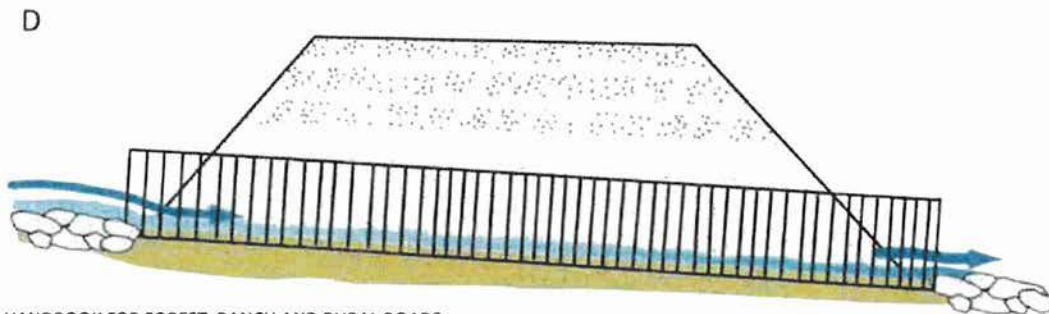
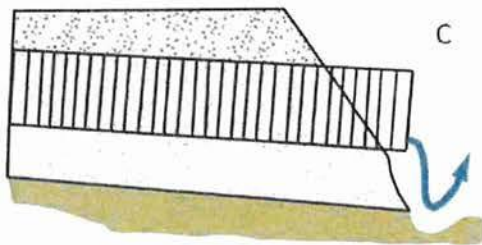
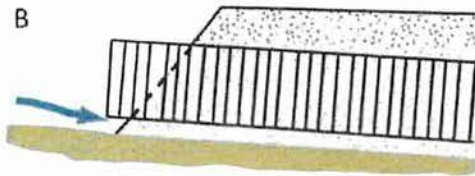


FIGURE 97. Culvert alignment should be in relation to the stream and not the road. It is important that the stream enters and leaves the culvert in a relatively straight horizontal alignment so streamflow does not have to turn to enter the inlet or discharge into a bank as it exits. This figure shows a redesigned culvert installation that replaces the bending alignment that previously existed. Channel turns at the inlet increase plugging potential because wood going through the turn will not align with the inlet. Similarly, channel turns at the inlet and outlet are often accompanied by scour against the channel banks (Wisconsin Transportation Information Center, 2004).

Figure 5C - Culvert Specifications

Culvert Installation Specifications



HANDBOOK FOR FOREST, RANCH AND RURAL ROADS

FIGURE 155. Proper culvert installation involves correct culvert orientation, setting the pipe slightly below the bed of the original stream, and backfilling and compacting the fill as it is placed over the culvert. Installing the inlet too low in the stream (A) can lead to culvert plugging, yet if set too high (B) flow can undercut the inlet. If the culvert is placed too high in the fill (C), flow at the outfall will erode the fill. Placed correctly (D), the culvert is set slightly below the original stream grade and protected with armor at the inlet and outlet. Culverts installed in fish-bearing stream channels must be inset into the streambed sufficiently (>25% embedded) to have a natural gravel bottom throughout the culvert (Modified from: MDSL, 1991).

Figure 5D - Culvert Specifications

Distance to Nearest Adjoining Parcel Primary Structure & Adjoining Parcel Use Code Descriptions



Aldeberan's Gaze Parcel Map

Humboldt County Planning and Building Department

Printed: October 31, 2022

Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

Blue Line Streams

- Perennial 1-3
- Perennial >4

Private or Unclassified

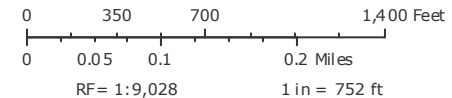
- Private or Unclassified
- Major River or Stream

Intermittent

- Intermittent
- Subsurface

City Boundary

- Counties
- Parcels
- Parcels (no APN labels)



Sources: Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Figure 6 - Adjacent Parcels