Hopland Band of Pomo Indians

Wetlands Program Plan (WPP)

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Submitted by:

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Introduction

This Wetland Program Plan (WPP) has been prepared to summarize the work the Tribe would like to undertake to permanently protect the Wetlands of the Hopland Reservation. The Hopland Reservation consists of 2000 acres in the southeast corner of Mendocino County, California (Figure 1). The reservation is in the relatively arid Mayacamas Mountains. Much of the upper elevations of the reservation are dominated by chaparral species while the lower elevations have in addition a mix of grasslands and oak woodlands. Within this area there are five distinct wetland types as follows:

- Approximately two miles of riparian wetlands associated with perennial and intermittent streams that still support spawning steelhead trout;
- Two vernal pools which support a number of rare plant species including Lobb's buttercup (*Ranunculus lobbii*) CNPS List 4:
- One small perched wetland supporting traditional marsh species such as cattails;
- A small riparian wetland below a hillside spring where a rare plant species, Peak rock-rose (*Helianthemum suffrutescens*) (CNPS List 3) has also been documented; and
- Numerous seep meadows.

The first four locations are shown in Figure 2. The vegetation of these areas is described on pages 30-38 in the report by Kerry Heise (Heise 2010). These areas support a great diversity of plant and animal life including many species of cultural importance to the Tribe.

The Hopland Band of Pomo Indians EPA Department looks forward seven generations in making decisions to care for the health of the Tribal members and their land. In keeping with that vision the EPA Department is developing a strategic plan to protect these wetlands.

The Tribe has an active program of inventory, monitoring and management of wetlands and other natural features as shown in Table 1.

All of the programs described in Table 1 deal with some aspect of wetland management and monitoring. However, because much of the funding comes from grants for specific purposes, they have been implemented in somewhat of a piecemeal approach. A wetland management plan would allow the tribe to have more of an integrated program, an "ecosystem approach" to wetland protection, restoration and management.

Table 1. Hopland Band of Pomo Indians Wetlands and Related Projects with Reference to Core Elements of Wetlands Programs.

(1) Project: Botanical survey of the riparian areas of the reservation (Heise 2006, Attachment 1);
Core Element: Restoration and Protection
Objective 1: Clearly and consistently define restoration and protection and protections goals throughout state or tribal territory
Key Action: Consider watershed planning, wildlife habitat, and other objectives when selecting restoration / protection sites

(2) Project: A recently completed botanical inventory of the reservation (Kerry 2010, Attachment 2);
Core Element: Restoration and Protection
Objective 1: Clearly and consistently define restoration and protection and protections goals throughout state or tribal territory
Key Action: Consider watershed planning, wildlife habitat, and other objectives when selecting restoration / protection sites

(3) Project: A vegetation map of the reservation (Figure 3);
Core Element: Restoration and Protection
Objective 1: Clearly and consistently define restoration and protection and protections goals throughout state or tribal territory
Key Action: Consider watershed planning, wildlife habitat, and other objectives when selecting restoration / protection sites

(4) Project: Surveys of the vertebrate fauna of the reservation (Heaton 2009; Kieffer 2010, Attachments 3&4);
Core Element: Restoration and Protection
Objective 1: Clearly and consistently define restoration and protection and protections goals throughout state or tribal territory
Key Action: Consider watershed planning, wildlife habitat, and other objectives when selecting restoration / protection sites

(5) Project(s): Several projects to control hillside erosion adjacent to riparian areas funded by an EPA Clean Water Act 319 competitive grant;
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

Table 1. Hopland Band of Pomo Indians Wetlands and Related Projects with Reference to Core Elements of Wetlands Programs (continued).

(6) Projects: Habitat typing and fish passage evaluation of reservation streams (Ross Taylor and Associates 2006; 2007;Attachments 5&6);
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

(7) Projects: Design of fish passage improvements (Winzler&Kelly 2009; Winzler & Kelley and Michael Love & Associates 2009, Attachments 7&8);
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

(8) Projects: Construction of fish passage improvements for box culverts that impede upstream and downstream migration of steelhead (funding from North Coast Integrated Regional Water Management Plan - Prop 84 Bond Money for $803,000; matching funds of $$203,237 being sought; funding and work expected to commence in July, 2011);
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

(9) Projects: An active solid waste program, much of which involves closing and cleaning up old dump sites in riparian areas and controlling further dumping in such areas;
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

(10**) Projects:** An active program of water quality monitoring and management under EPA Clean Water Act. Sections 106 & 319 grants;
Core Element: Monitoring
Objective 2: Implement a sustainable monitoring program consistent with the wetlands monitoring strategy
Action: Ensure the scientific validity of monitoring and laboratory activities.

Table 1. Hopland Band of Pomo Indians Wetlands and Related Projects with Reference to Core Elements of Wetlands Programs (continued).

(11) Project: Capping and abandonment of an artesian well with high levels of barium and arsenic contaminating adjacent soil, riparian area and creek (work completed in 2010 with a Brownfields Cleanup grant);
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

(12) Project: Cleanup of contaminated soil from artesian well (work to be completed in 2011 with Brownfields cleanup grant);
Core Element: Restoration and Protection
Objective 3: Restore wetland acres, condition and function
Key Action: Improve natural wetland conditions and functions through restoration (rehabilitation)

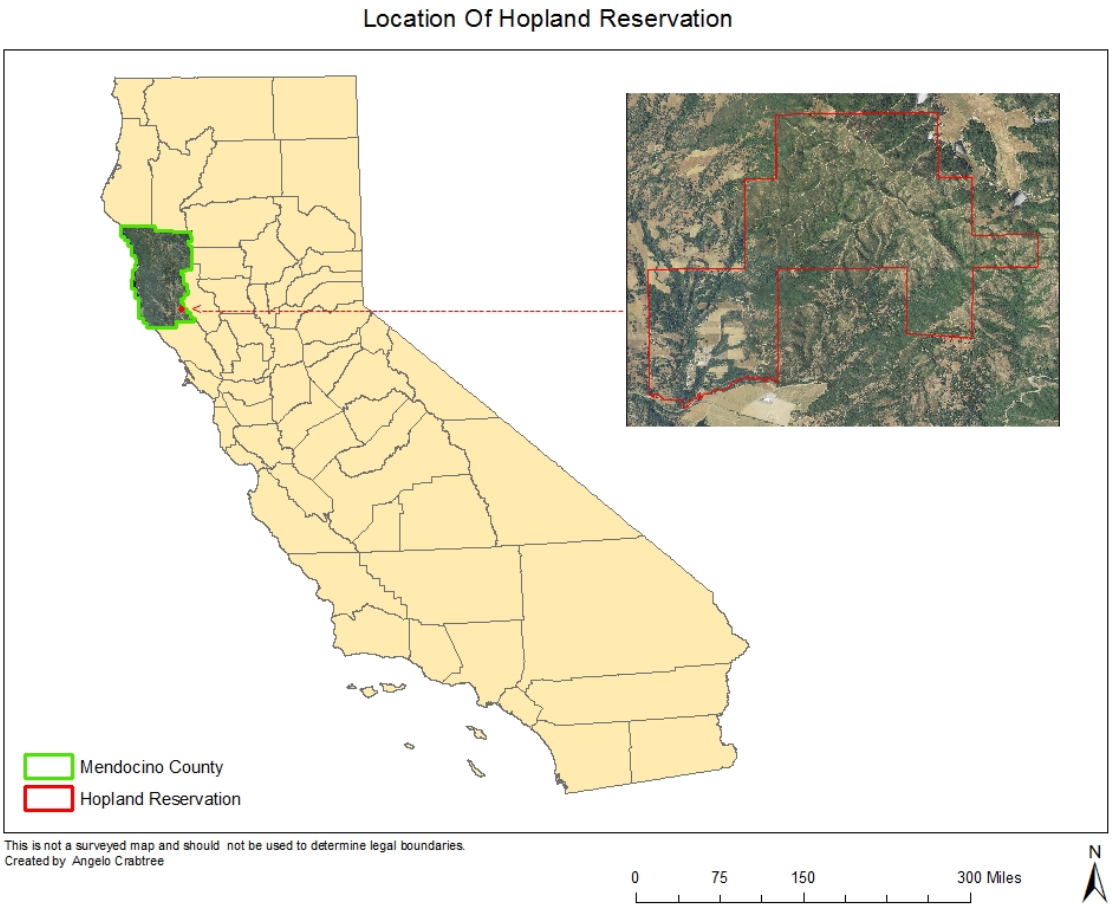

Figure 1. Location of Hopland Reservation.

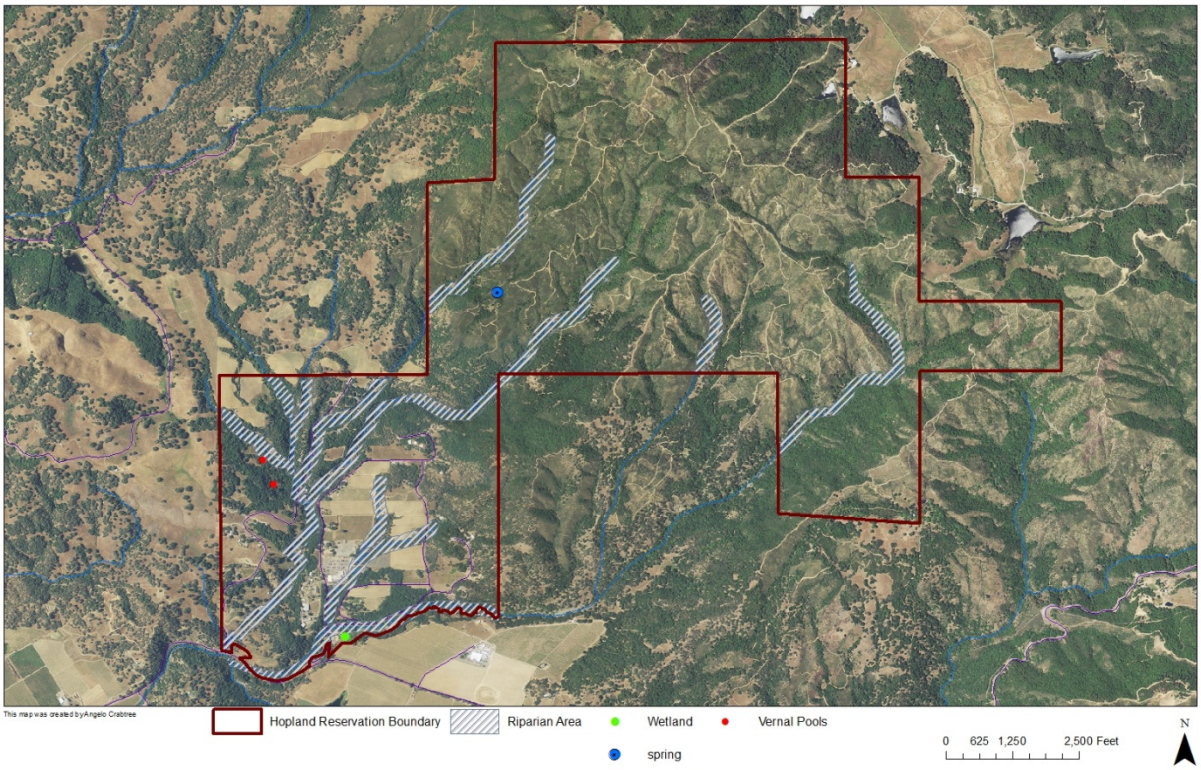

Figure 2. Location of Wetlands

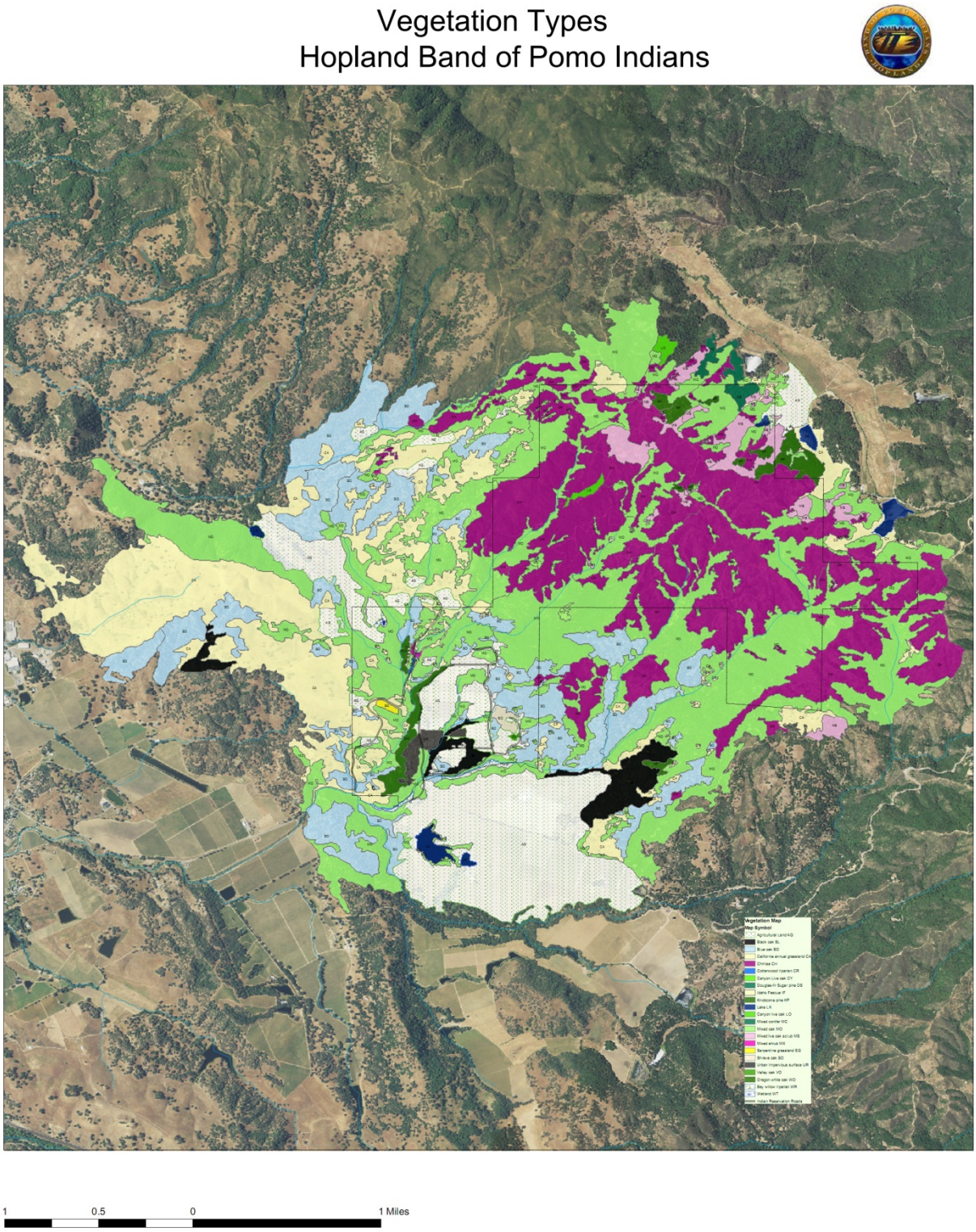

Figure 3. Vegetation Map.

Overall Goal Statement and Time Frame for the Plan

The overall goal for the wetland management program is to identify and implement restoration and protection measures to conserve the Tribal wetlands and the biodiversity that they support. Specific objectives to achieve this goal include:

- Identification and implementation of best management practices and protective measures for each category of wetland (*Restoration and Protection, Objective 1, Action c*);
- Identification and implementation of monitoring programs to detect any degradation of these wetlands (*Monitoring, Objective 2, Action b)*;
- Implementation of programs to educate and train Tribal members, particularly the youth, on the values and stewardship of the wetland (*Restoration and Protection, Objective 2, Action a*); and
- Integrate various programs affecting wetlands into a program with common goals, objectives, and priorities (*Monitoring, Objective 3, Action d).*

In all these efforts Traditional Environmental Knowledge (TEK) will be blended with Western conservation biology so as to encompass the fullest possible access to information.

The Tribe will work towards these goals by implementing the following 5 year plan:

Actions and Activities Supporting Overall Goal and Objectives

Year One (2011)

Action: Define wetland restoration and protection activities appropriate for each type of wetland on the reservation and share such information with tribal community (*Restoration and Protection, Objective 1, Action c*).

Activities:

- The Tribal EPA Department will research existing literature and meet with appropriate specialists to identify threats to existing wetlands, appropriate protection or restoration activities and potential monitoring activities.
- EPA department will share this information with tribal community through meetings, field trips, community meetings, and posting riparian herbarium samples and other riparian information on the Tribal EPA website.

Outputs: Annual Report; Additions to Tribal EPA website.

Year Two (2012)

(1) Action: Develop a wetland management plan (*Restoration and Protection, Objective 1, Action c).*

Activities:

- Describe restoration and protection measures necessary to restore or protect each wetland area on the reservation.
- Present draft management plan to Tribe.
- Modify plan to incorporate feedback and TEK from tribal members.
- Present plan to Tribal Council for approval.
- Seek funding for protection and restoration activities such as fencing, invasive plant removal, and a nature trail with signage.

Outputs: Draft and Final Wetland Management Plan

(2) Action: Develop wetland monitoring program (*Monitoring, Objective 1, Actions a,b,c,d).*

Activities:

- Develop a monitoring program to determine if goals and objectives are being reached; monitoring will cover riparian wetlands, vernal pools and the two perched wetlands but not the seep meadows; sites where restoration activities are taking place or planned will be monitored as well as sites where no restoration is planned.
- Develop approved QAPP for monitoring program
- Integrate wetlands monitoring strategy with existing Clean Water Act 106 and 319 monitoring programs
- Take baseline measurements

Outputs: Written monitoring plan with approved QAPP: Initial data set and monitoring database

Year Three (2013)

(1) Action: Implement Restoration and Protection Activities identified in Management Plan *(Restoration and Protection, Objective 2, Action c, and Objective 3, Action b)*

Activities: Activities below are potential activities that may occur; others may be identified in Year One and Two and some may not be needed or determined not to be feasible or desirable.

- Protective fencing
- Signage
- Invasive plant control or removal (Himalayan blackberry etc.,)
- Removal of potential contaminants from riparian areas
- Control of non-native animals
- Nature trail

Outputs: Structural improvements (fencing, signage, trails, etc.)

(2) Action: Implement Monitoring Program (*Monitoring, Objective 2, Action b)*

Activities: Systematic data collection of physical, chemical, and biological parameters according to approved monitoring plan and placement of data into monitoring database.

Outputs: Expanded data base.

(3) Action: Education and Outreach (*Restoration and Protection, Objective 2, Action a)*

Activities: Activities below will be designed to educate tribal members especially youth about wetland values, management, protection, restoration, and monitoring.

- Provide a variety of education and outreach efforts about ecological, spiritual, and cultural values of wetlands
- Identify and train staff to monitor wetlands
- Train tribal members, interns and youth in monitoring techniques

Outputs: Training materials

Year Four (2014) and Year Five (2015)

Action and Activities: Continue with implementing management activities, monitoring, and education and outreach as guided by management plan and monitoring plan.

Year Five (2015)

(1) Action: Use monitoring data to evaluate the effectiveness of the management plan and need for continued activities (*Restoration and Protection, Objective 4, Action c)*

Activity: Prepare a report for submission to EPA on the effectiveness of the management plan and the future outlook. The report will address, at a minimum, the following topics:

- effectiveness of management and restoration activities;
- effectiveness and efficiency of monitoring actives;
- any new or future threats to reservation wetlands that have been identified;
- prioritized recommendations for future activities; and
- recommendations for long term monitoring.

Outputs: Comprehensive report on wetland management and monitoring of the Hopland Reservation

(2) Action: Revise WPP, Wetland Management Plan, and Wetland Monitoring Plan as appropriate *(Restoration and Protection, Objective 4, Action C)*

Activity: Prepare revised WPP, Wetland Management Plan and Wetland Monitoring Plan; Obtain Tribal Council approval of revised Wetland Management Plan.

Outputs: New 5-year WPP, 5-year Wetland Management Plan and 5-year Wetland Monitoring Plan.

Attachments – All these Attachments are available on the Hopland Band of Pomo Indians Web Site under the Tribal EPA Department.

1. Heise, K. 2006. Vascular plants associated with intermittent tributary streams on the Hopland Reservation, Mendocino County, California. Unpublished report to Hopland Tribal EPA Department by Kerry Heise, Botanical Consultant. 10pp.

2. Heise, K. 2010. The botanical resources of the Hopland Reservation, Mendocino and Lake Counties, California. Unpublished report to Hopland Tribal EPA Department by Kerry Heise, Botanical Consultant. 124pp.

3. Heaton, E. 2009. Wildlife of the Hopland Reservation. Unpublished Report to Hopland Tribal EPA Department by Emily Heaton, Wildlife Consulting. 14pp.

4. Kieffer, B. 2010. Mammals Inventory-Supplement to: Wildlife of the Hopland Reservation 2008 & 2009 & 2010 Reports. Unpublished Report to Hopland Tribal EPA Department by Bob Kieffer, Wildlife Consultant. 14pp.

5. Ross Taylor and Associates. 2006. Hopland Band of Pomo Indian Reservation: Stream Crossing Inventory and Fish Passage Evaluation. Unpublished Report to Hopland Tribal EPA Department. 53pp.

6. Ross Taylor and Associates. 2007. Habitat Typing Surveys of Russian River Tributaries located on the Hopland Band of Pomo Indians Reservation. Unpublished Report to Hopland Tribal EPA Department. 26pp.

7. Winzler&Kelly and Michael Love and Associates. 2009. Design report for a fish passage improvement project on Nissa-kah Creek at Nokomis Road. Unpublished Report to Hopland Tribal EPA Department. 24pp.

8. Winzler&Kelly. 2009. Alternatives analysis for Nissa-kah Creek crossing at Highway 175, Hopland, California. 11pp.