Public Works Department, Park Division
411 Main Street, 2nd Floor
(530) 896-7800

Agenda Prepared: 6/23/2014
Agenda Posted:6/26/14
Prior to: 5:00 p.m.

CITY OF CHICO
BIDWELL PARK AND PLAYGROUND COMMISSION (BPPC)

Regular Meeting Agenda
June 30, 2014, 6:30 pm
Municipal Center - 421 Main Street, Council Chamber

Materials related to an item on this Agenda are available for public inspection in the Park Division Office at 411 Main Street during normal business hours or online at http://www.chico.ca.us/.

1. REGULAR COMMISSION MEETING

1.1. Call to Order

1.2. Roll Call

2. CONSENT AGENDA

All matters listed under the Consent Agenda are to be considered routine and enacted by one motion.

2.1. Approval of Meeting Minutes

Action: Approve minutes of BPPC held on 5/27/14.

ITEMS REMOVED FROM CONSENT – if any

3. NOTICED PUBLIC HEARINGS - None

4. REGULAR AGENDA

4.1. Trail Run (10/12/14)

Applicant (Chico Running Club) requests permit for a trail run from Hooker Oak to the end of Upper Park Road and retuning on the Yahi Trail. This is the 7th year of the event. Requires BPPC consideration as it requests use of a non-intensive use area. **Recommendation:** Conditional approval of permit.

4.2. Run the Bump (8/30/14)

Applicant (Ready2Run) requests permit for a trail run that essentially follows the "Bidwell Bump" route from the Five Mile Recreation Area. The "Bump" route crosses the creek and returns on the south side of Upper Park. This is the 1st year of the event. Requires BPPC consideration as it requests use of a non-intensive use area. **Recommendation:** Conditional approval of permit and modification of proposed route.

4.3. Special Report: 2013 Year End Monitoring Report for the Peregrine Point Disc Golf Long Course

Staff will present monitoring data and recommendations for additional tasks and changes to improve the course. Staff requests acceptance of the report as it recommends a notable change to the course with the creation of alternative holes or targets at many of the holes. **Recommendation:** 1) Review and provide input to Staff, and 2) Accept the 2013 Report.

5. BUSINESS FROM THE FLOOR

Members of the public may address the Commission at this time on any matter not already listed on the agenda; comments are limited to three minutes. The Commission cannot take any action at this meeting on requests made under this section of the agenda.

6. REPORTS

Items provided for the Commission's information and discussion. No action can be taken on any of the items unless the Commission agrees to include them to a subsequent posted agenda.

6.1. Tree Committee, Rich Ober (Committee Chair)

6.2. Parks and Street Trees Division Report - Dan Efseaff, Park and Natural Resource Manager.

7. ADJOURNMENT

Adjourn to the next regular meeting on July 28, 2014 at 6:30 p.m. in the Council Chamber of the Chico Municipal Center building (421 Main Street, Chico, California).

Please contact the Park Division Office at (530) 896-7800 if you require an agenda in an alternative format or if you need to request a disability-related modification or accommodation. This request should be received at least three working days prior to the meeting.

CITY OF CHICO
BIDWELL PARK AND PLAYGROUND COMMISSION (BPPC)
Minutes of
May 27, 2014 Regular Meeting

1. REGULAR COMMISSION MEETING

1.1. Call to Order

Vice Chair Moravec called the meeting to order at 6:35 pm.

1.2. Roll Call

Commissioners present:

Mary Brentwood
Jim Moravec
Richard Ober
Drew Traulsen

Commissioners absent:

Lisa Emmerich
Mark Herrera
Janine Rood

Staff present: Dan Efseaff (Park and Natural Resource Manager) and Linda Herman (Administrative Manager).

1.3. Special Presentation: Award to the Mount Lassen Chapter California Native Plant Society (CNPS) for a Keep American Beautiful Waste Management grant to support invasive plant removal on City of Chico parks and other areas.

Waste Management District Manager Ryan West presented CNPS representative Susan Mason with a large check in the amount of $4,000 for disposal and other costs to remove invasive plants on City parks and greenways and other areas.

2. CONSENT AGENDA

Items 2.2 and 2.3 were removed from the Consent Agenda for further discussion by Commissioner Ober.

2.1. Approval of Meeting Minutes

Action: Approve minutes of the BPPC meeting held on 4/28/14.

MOTION: Approved Item 2.1 – Minutes of the 4/28/13 BPPC meeting as submitted. **MADE BY**: Brentwood. **SECOND**: Traulsen. **AYES:** 4 (Brentwood, Moravec, Ober and Traulsen). **NOES:** 0. ABSENT**:** 3 (Emmerich, Herrera and Rood).

ITEMS REMOVED FROM CONSENT – 2.2 and 2.3 removed by Commissioner Ober.

2.2. Tree Removal Permit for 534 Mission Santa Fe Circle

Applicant (Phyllis Lindberg) requests approval of a permit to remove a 20" diameter sycamore tree growing within the City ROW. Landowner is concerned that the tree's proximity to existing gas and electrical lines will pose a future hazard to public health and safety. **Recommendation:** Approval of removal permit.

2.3. Tree Removal Permit for 1609 Ridgebrook Way

Applicant (Judy Hemstalk) requests approval of a permit to remove and replace a 12" diameter sycamore tree growing with in the City ROW. Landowner requests removal because the invasive root system is lifting the sidewalk and driveway (>1"). **Recommendation:** Approval of removal permit.

Commissioner Ober pulled both tree removal permit applications to receive Staff's confirmation that the Sycamore trees being requested to be removed fit under the new proposed Programmatic Tree Removal policy.

Commissioner Traulsen asked whether the permits would require the homeowners to plant replacement trees. In response, Park and Natural Resource Manager (P&NRM) Efseaff said that for the location on Item 2.2 – Mission Santa Fe Circle there is no room for a replacement due to the location of underground utilities and safety concerns. For the permit in Item 2.3 the homeowner is required to plant another more suitable replacement tree.

MOTION: Approved Tree Removal Permit Items 2.2 and 2.3 of the consent agenda as submitted. **MADE BY**: OBER. **SECOND**: Traulsen. **AYES:** 4 (Brentwood, Moravec, Ober and Traulsen). **NOES:** 0. ABSENT**:** 3 (Emmerich, Herrera, and Rood).

3. NOTICED PUBLIC HEARINGS – None

4. REGULAR AGENDA

4.1. Permit Application for a Music Concert to show appreciation and acknowledgement to the Downtown Ambassadors (6/5/14)

Applicant (Ronald Reed) applied for a permit for a music concert at Children's Playground to acknowledge the efforts of the Downtown Ambassadors to "make downtown Chico a cleaner, safer, better place to live". **Recommendation:** Conditional approval.

Efseaff stated that this permit application is coming before the Commission because the Chico Municipal Code limits amplified sound to 20 minutes at the Bidwell Bowl Amphitheater. Efseaff continued that the DCBA Friday Night Concerts were held in Children's Playground during the reconstruction of City Plaza with little or no problems and that Staff will review this time restriction for a possible code amendment request in the future.,

Ober concurred that perhaps it is time to review the restrictions since Bidwell Bowl is a good and appropriate venue for these types of events.

MOTION: Approved Park Permit Application Item 4.1 of the regular agenda as submitted. **MADE BY**: Brentwood. **SECOND**: Ober. **AYES:** 4 (Brentwood, Moravec, Ober and Traulsen). **NOES:** 0. ABSENT**:** 3 (Emmerich, Herrera, and Rood).

4.2. Permit Application for the Primal Endurance X (9/6/14)

Charity 5K and 10K Run/Walk to help raise awareness and money for the Downtown Chico Business Association and Clean and Safe Chico. Application is to reserve City Plaza. The event will require street and/or encroachment permits. **Recommendation:** Conditional approval based on Applicant receiving appropriate permits for street and Right of Way issues.

P&NRM Efseaff stated that the BPPC is considering this permit application because the applicant is requesting that this 5K/10K Run/Walk is not utilizing the standard regular race route because it starts at City Plaza, encompasses parts of downtown streets, and ends in lower Bidwell Park.

Ober – asked whether this applicant has conducted other events and was present to ask questions. Staff replied no to both questions.

Moravec – expressed concerns about the applicant not being at the meeting and not knowing anything about this organization. He referenced the problems and damages that occurred from the Neon color run held in Bidwell Park in the past.

Ober and Brentwood - concurred with Moravec's concerns, but clarified that because the regular and standardized race route will be used while in Bidwell Park that the BPPC's only real purview was whether to allow them to reserve City Plaza.

Moravec – asked if there is any downside of approving the permit, if the applicant fails to get the appropriate street and right-of-way permits. Particularly he referred to tying up the September 6th date and how it could affect other potential reservations at the Plaza for this date. Staff replied that it is common practice for applicants to come in right after their annual event to book a venue for the following year.

FROM THE PUBLIC:

Steve Rooney – Stated that he has reserved the City Plaza for over 24 years and for over 40 years at the Silver Dollar Fairgrounds for his semi-annual Artisan's Faire. He said he has a been a long-time permit applicant with a good track record, and is concerned about having to pay all of the reservation and other fees up front before he can reserve the venue. He continued that his fees total approximately $700/yr. and that sales from the Faire have been down due in part to the panhandlers approaching attendees. He stated that the policy of requiring advanced payment of fees is a hardship for him.

P&NRN Efseaff responded that the policy to require advanced payment of fees was put in place several years ago and has saved staff time in processing park permits.

MOTION: Approved Park Permit Application Item 4.2 of the regular agenda subject to the Conditions 1 through 5 in the Staff Report, plus a 6th Condition that if the applicant does not obtain the approved street closure and encroachment permits for the event then the Park Application Permit is also denied. **MADE BY**: OBER. **SECOND**: Brentwood. **AYES:** 4 (Brentwood, Moravec, Ober and Traulsen). **NOES:** 0. ABSENT**:** 3 (Emmerich, Herrera, and Rood).

5. BUSINESS FROM THE FLOOR

Steve Rooney continued his discussion regarding the difficulty of having to come up with all of the fees a year in advance.

6. REPORTS

Items provided for the Commission's information and discussion. No action can be taken on any of the items unless the Commission agrees to include them to a subsequent posted agenda.

6.1. Tree Committee – Richard Ober, Committee Chair

Committee Chair Ober reported that at its 5/14/14 meeting, the Committee discussed two items. One was a proposal from Staff for a public/private partnership program that would establish a protocol and procedure to allow volunteers to plant street trees in the City Right-of-Way. Efseaff

added that staff will be coming forward with an Administrative Policy and Procedure for the program at a future BPPC meeting.

Ober said that the second item was continued discussions regarding the Urban Forest Management Plan. Ober stated that the Committee will focus on the objectives of the Plan at its next meeting.

6.2. Parks and Street Trees Division Report - Dan Efseaff, Park and Natural Resource Manager.

P&NRM Efseaff provided a summary of the Report by outlining the following:

1. The City is having difficulty finding trained and certified lifeguards this year, delaying the formal opening of the Sycamore Pool. He stated that they are trying to advertise in the media to get more applicants.
2. There will be a ribbon cutting and opening of the new assessable trail at Horseshoe Lake on Friday, June 6, 2014.
3. A design concept for the renovation of Caper Acres will be posted on the City website for public comment, and will also be discussed at the next BPPC Natural Resource Committee meeting.
4. The City's tree pruning contractor is conducting safety pruning of City trees within the major traffic corridors around Chico.
5. Two successful Arbor Day events were held on National Arbor Day on 4/25/14 in which CSU, Chico students, fraternity members, and staff planted five Maple trees at 3rd and Chestnut Streets, and another citizen volunteer group from Chico Tree Advocates planted five Purple Ash trees on El Dorado Street.
6. Another successful Earth Day event was held from 9 am to 12 pm on Saturday April 19,, 2014, in which over 150 volunteers worked at the Comanche Creek Greenway, North One-Mile Area, and in the Cedar Grove/Chico Creek Nature Center area.

7. ADJOURNMENT

Adjourn to the next regular meeting on June 30, 2014 at 6:30 p.m. in the Council Chamber of the Chico Municipal Center building (421 Main Street, Chico, California).

Date Approved: / /.
Prepared By:

Linda Herman, Administrative Manager Date

Distribution: BPPC

M:\PARK\Admin\BPPC\BPPC_Meetings\2014\14_0527\BPPC_Minutes_14_0527.doc
6/24/2014

BPPC Staff Report Meeting Date June 30, 2014

DATE: 6/25/14

TO: Bidwell Park & Playground Commission (BPPC)

FROM: Theresa Rodriguez, Administrative Assistant

SUBJECT: Chico Running Club – Trail Run, October 12, 2014

REPORT IN BRIEF:

Applicant (Chico Running Club) requests permit for a trail run from Hooker Oak to the end of Upper Park Road and retuning on the Yahi Trail. This is the 7th year of the event. Requires BPPC consideration as it requests use of a non-intensive use area.

Recommendation: Conditional approval of permit.

Event Details

Date of Application	May 13, 2014
Date and Time of Event	October 12, 2014 6:00 A.M. – 1:00 P.M.
Event Name	Trail Run
Applicant Name	David Bryant/Chico Running Club
Description	Trail run from Hooker Oak Park to end of the road in upper park and back on the Yahi trail
New Event? / # years?	7 years
# Participants	150
Reason for BPPC Consideration?	This group is requesting the use of non-intensive use areas in Middle and Upper Park.

Conditions

Staff recommends the following conditions:

- Continued adherence to all park rules.
- Obtain a permit from CARD for use of Hooker Oak Recreation Area.
- Maintain participants at roughly the same level and below the participant cap of similar events (500).
- Vehicle access will not be available for set up and will have to enter on bikes.
- The applicant must provide sufficient monitoring to keep racers on the established route as well as direct traffic where the route crosses the road. Adequate signage must also be in place in order to ensure racers follow the established routes and also to notify other park users of the event.
- In the event that the Middle and Upper Park trails are closed due to wet or unsafe conditions, the race course will need to be altered accordingly and approved by the Park Division. The applicant has agreed to either move the route to paved paths and roads or change the date of the event in the case of a wet weather closure of the trails.
- Close and lock all gates behind them and lock at the end of the event.
- The applicant will need to do a final inspection of the race courses at the conclusion of the event and remove all signs and course markings as well as pick up any associated trash.

Attachments: Application & Permit for Park Use

Distribution: David Bryant

M:\PARK\Admin\BPPC\BPPC_Meetings\2014\14_0630\BPPC_Chico_Running_Club_Trail_Run_14_1012.doc
6/25/2014

City of Chico

APPLICATION & PERMIT FOR PARK USE

Public Works Department - Park Division
411 Main St., 2nd Floor/P.O. Box 3420
Chico, CA 95927-3420
(530) 896-7800 Fax: (530) 895-4899

Type of Event:

PUBLIC [X] PRIVATE [ ]

SECTION 1 - APPLICANT INFORMATION

Must be 18 or older • No glass beverage containers • Application fee due upon submittal •

THIS RESERVATION IS NOT VALID UNTIL APPROVED BY THE PARK DIVISION. **PLEASE PRINT:**

David Bryant
Name of Applicant/Contact Person

Chico Running Club
Organization Name (if applicable)

[redacted]
Contact Phone # Alternate Phone #

Trail Run
Description of Event: (family BBQ, walk/run, describe below if needed)

Oct. 12, 2014
Day and Date of Event:

From: 6:00 am To: 1:00 pm
Total Time Needed for Set-up, Event, and Clean-up

From: 8:00 To: 11:30 2 / 150
Times of Event Only Number of people

E-mail ad[redacted]

Note: Park gates will not remain closed beyond normal opening time for any event with less than 1,000 people. All races with less than 1,000 people at One Mile must start before 8:30 am. Street closure(s) subject to approval.

AREA REQUESTED: (Please check if requested)

- [ ] **Bidwell Bowl Amphitheater**
  - [ ] Electricity (15 amp)

  Note: Special conditions apply for amplified sound (12R.08.263 CMC)
- [ ] **Cedar Grove Picnic Area**
  - [ ] Electricity (15 amp) tables, restroom area (circle)
- [ ] **Meadow**
  - [ ] 100 amp Electrical Service
  - [ ] Water (public events only)
- [ ] **Children's Playground**
  - [ ] Electricity (15 amp)-Pick up key on:_____Mon – Fri 8:00 – 3:30
  - [ ] Water (public events only)
  - [ ] 100 amp Electrical Service
- [ ] **City Plaza** (Additional fees may apply)
  - [ ] Electricity (15 amp)
  - [ ] Event Restrooms
  - [ ] Fountain - On
  - [ ] Meter Bags #_____
  - [ ] 100 amp Electrical Service
  - [ ] Water (public events only)
  - [ ] Fountain - Off
  - [ ] Sound Curtain
- [ ] **Council Ring**
  - [ ] Fire Permit
- [ ] **Five Mile Picnic Area**
- [ ] **One Mile Picnic/Barbeque Area** - Water available, no hose bib
  - [ ] **Oak Grove A**
  - [ ] **Oak Grove B**
  - [ ] Sycamore Way Parking Lot Closure-Public Events ONLY
  - [ ] Electricity (15 amp) parking area, restroom area (**Pick up key**)
- [ ] Band Stand (15 amp)
  - [ ] BBQ-Pick up key on: _____ Mon – Fri 8:00 AM – 3:30 PM
- [ ] **Depot Park**
  - [ ] Electricity (15 amp)
- [ ] **Lower Bidwell Park** (public events only):_____
- [X] **Upper Bidwell Park** (public events only):_____
- [ ] **Other (specify)** (public events only):_____
- [ ] **Early Entrance Needed** (public events only) ___Yes ___No

Additional Description of the Event: Trail Run from Hooker Oak Park to end of road in upper Park & back on Yahi trail

FOR PARK RANGER ASSISTANCE during the event, CALL 530-897-4900 (Police Department Dispatch)

SECTION 2 - PERMIT FEES

Call Park Office at 896-7800 for availability of park areas and fee schedule 80.020

[X] Application Fee	$ 19.00	(Non-Refundable)
[X] Reservation Fee	$ 60.50	($11.00 minimum, please call for quote)
[X] Insurance Fee	$ 40.00	($40.00 to process outside insurance)
[ ] Vendor Fee #_____	$_____	($6.00 per vendor)
[X] Damage Deposit	$ 100.00	($100.00 refundable following acceptable clean-up after event)
[X] Early Entrance Fee	$ 32.50	($32.50/hr, public events only)
[ ] Additional Park Use Fees	$_____	(see fee schedule)

Additional fees for City Plaza use:

Event Restrooms _____ x ($95.00) = $_____ (#days)

100 amp Electrical _____ x ($30.00) = $_____ (electrician required) #days

Total Fee Required: $ 252.00

Fee due upon submittal of application * *Make Checks Payable to: City of Chico*

City of Chico Cash Receipt No. CR380460 Payment Method: CK 308 Date: 5/13/14 Received By: CH

Office Distribution:	Permit File (original)	Park Ranger 1	Senior Park Ranger	Applicant ✓	Email(various)
	Park Field Supervisor	Park Ranger 2	Landscape Inspector.	Risk Management (e-mail)	920 Fund

SECTION 3

CONDITIONS FOR PARK USE

You Are Responsible for Knowing the Park Rules. Please Observe the Following:

Alcohol	Alcohol is not permitted in any City Park or Playground.
BBQ's	Portable BBQ's may only be used next to existing BBQ's in Lower Bidwell Park and Five Mile Recreation Areas.
Bicycles	Must observe all California vehicular codes including one-way streets. Riders are expected to be courteous and yield to equestrian and pedestrian traffic. Helmets must be worn at all times in Upper Park, except when on pavement. Riders must stay on designated trails. Bicycle riding is not allowed in Caper Acres or on the Sycamore pool deck.
Bounce Houses	Bounce houses and other similar play equipment are only permitted with a reservation and upon approval by the Park Division. The operators of this equipment must provide proof of insurance. Bounce houses are not allowed in Caper Acres.
Campfires	No campfires allowed.
Camping	No overnight camping allowed. Bidwell Park is a "day use park" only.
Clean up	Permittee is required to completely clean up area at the conclusion of event. Additional garbage bags may be obtained from the General Services Department at time of reservation. (12R.04.180 CMC)
Damages	Any damage to City property as a result of this event will be repaired at permittee's expense.
Dogs	Dogs may be off leash from 5:30 AM until 8:30 AM in Lower Park -- All other times **dogs must be on a leash**. Along the north side of Upper Park Road, dogs may be "off leash" anytime. While "off leash," dogs must remain under control via master's voice. ***Dogs are not allowed in Caper Acres, One-Mile or Five-Mile swimming areas, or designated swimming holes in Upper Park.***
Electrical	All power extension cords, sound amplification equipment, and staging to be supplied by permittee. Permittee shall provide "tripping" prevention devices over power cords crossing any pathway.
Fishing	**Big Chico Creek**: Check California Fish and Game Regulations, http://www.dfg.ca.gov/regulations/, Freshwater Sport Fishing, Alphabetical List of Waters with Special Fishing Regulations, (20) Big Chico Creek. **Horseshoe Lake**: Age 14 and over - license, catch and release; Under 14 - no license, catch and keep.
Gate Closures	Upper Park gate at parking are E is closed on Sundays and Mondays and during wet periods. Gates can be closed for approved special events. See www.ci.chico.ca.us/general_services_department/park_division/gate_closing_hours.asp
Glass	No glass beverage containers allowed in any City Park or Playground.
Horses	Horses must stay on designated trails. Horses are not allowed in One-Mile or Five-Mile Recreation Areas. Horses must cross the creek at approved crossings. Safe and courteous riding is the Park standard.
Noise	No loud or unusual noises are allowed, including: radios and headsets that can be heard over 50' away. Music/Amplified Sound at One-Mile Recreation Area, please, face all speakers away from Woodland Ave.
Park Closures	Lower Park is closed from 12:00 am (midnight) until 5:00 am every day, unless directly and actively proceeding to a destination outside of the park. Upper Park is closed between the hours of 11:00 pm and 60 minutes before sunrise every day, unless posted otherwise.
Signs/Defacing	Defacing of trees, benches, tables, any park fixtures, open ground, or paved roads/paths with markings, staples, tacks, or signs is prohibited. No pinatas, or accessories shall be affixed to trees. Only barricades, cones, or self standing devices may be used for these purposes.
Smoking	Smoking is not permitted in any City Park or Playground.
Swimming	While in the 1-Mile swim area compliance with lifeguards is required for public safety. Pool is open and lifeguards are on duty from Memorial Day through Labor Day.
Vegetation	No taking, cutting or injury of any vegetation in the Park is allowed.
Vehicle Traffic	• While gates are closed, limited use of vehicles to set up for event is permitted. Vehicles must be in compliance with the one-way designation of the roadway, must yield to all other activities (walking, jogging, bicycling, and horseback riding), must travel with flashers on and may not exceed ten (10) miles per hour. • Permittee shall provide adequate signs and supervision to avoid conflicts between vehicles, bicycles, equestrians, and general public. • Only emergency vehicles will be allowed access through the area of South Park Drive which has been closed to motor vehicles. • No vehicles are permitted to travel or park on grass areas.

***I have read and agree to conform to the above rules and conditions:**

Signed: 

SECTION 4 – INSURANCE

(to be determined by Park Office)

INSURANCE REQUIREMENTS ARE APPLICABLE TO: [X] Insurance Required [ ] Not Required

(1) All Public Events per Title 12R.08.240, and/or

(2) All Events Public or Private where:

(a) Amplified sound is used, or (b) The number of people participating amount to 100 or more.

For Insurance questions for your event, please contact the Risk Management office at 530-879-7910, by fax at 530-895-4733, or email at riskmanagement@chicoca.gov

If insurance is required, Certificate of Insurance, meeting City standards must be received by:_____

Organization Named on Certificate of Insurance Chico Running club

Permittee shall supply, at least two (2) weeks in advance of the scheduled event, a Certificate of Insurance issued by a company licensed to do business in California with a Best's Insurance Guide rating of "B" or better ("A" rated if Company is unlicensed) which provides evidence of comprehensive and general liability coverage in the amount of $1,000,000 combined single limit, with policy endorsements as follows:

(1) Identification of permit applicant, identification of event, date of event.

NOTE: NUMBERS 2 AND 3 MUST BE SEPARATE ENDORSEMENTS:

(2) The City of Chico, its officers, boards and commissions, and members thereof, its employees and agents are covered as additional insureds as respects to any liability arising out of the activities of the named insured.

(3) The insurance coverages afforded by this policy shall be primary insurance as respects to the City of Chico, its officers, employees, or agents. Any insurance or self-insurance maintained by the City of Chico, its officers, employees, or agents shall be in excess of the insurance afforded to the named insured by this policy and shall not contribute to it.

(4) An unqualified statement that "The insurer will provide the City at least ten (10) days prior notice of cancellation or material change in coverage", standard Certificate of Insurance cancellation language is not acceptable

Please Note: Your reservation may be cancelled if the insurance is not approved at least two weeks prior to the scheduled event

SECTION 5 - ACCEPTANCE OF CONDITIONS

In signing this Permit, I agree to indemnify and hold the City of Chico and/or the Bidwell Park and Playground Commission free and clear of all claims of damage for injury to persons or property occurring in, upon or about Bidwell Park, and arising from my use of the park as noted above, and to defend any action against the City of Chico resulting from any such claim, without cost to the City.

*I certify that I have read this application thoroughly, followed any and all instructions, understand its contents, will comply with the attached "Conditions for Park Use", will adhere to any additional conditions set forth by this permit, and supplied true and correct information herein to the best of my knowledge and belief.

X _____ X 5-13-14

Signature of Applicant **Date**

RETURN THIS FORM TO:

City of Chico - Park Division
411 Main St., 2nd Floor
Chico, CA 95928
FAX 530-895-4899 or email to Parkinfo@chicoca.gov

THIS RESERVATION IS NOT VALID UNTIL APPROVED BY THE PARK DIVISION.
A copy of the approved application will be returned to you.

SECTION 6 – GENERAL SERVICES DIRECTOR AUTHORIZATION

I certify that I have carefully reviewed this application pursuant to Title 12 and 12R of the Chico Municipal Code and hereby recommend that this permit be:

[ ] Approved.

[ ] Approved subject to listed additional condition(s)_____

_____

[ ] Denied by the General Services Director. Reason:_____

[ ] Application fee waived (12R.08.100 CMC). Reason:_____

[ ] Reservation fee waived (12R.08.250 CMC). Reason:_____

[ ] Vendor fee waived (12R.08.250 CMC). Reason:_____

[ ] Insurance fee waived (12R.08.240 CMC). Reason:_____

[ ] Damage deposit fee waived (12R.08.260 CMC). Reason:_____

[ ] Application approved by the Bidwell Park & Playground Commission. Date:_____

[ ] Application denied by the Bidwell Park & Playground Commission. Reason:_____

_____ Date:_____

_____ _____

Signature of Park and Natural Resources Manager Date

EVENT INFORMATION

Please answer the following questions by circling "Yes" or "No"

Is this an annual event? How many years have you been holding this event? 7	(Yes)	No
Is there a patron admission, entry, or participant fee(s) required for your event?	(Yes)	No
Will there be amplified sound/music at event? (Please see 'Conditions For Park Use') Specify type (microphone, band, radio, PA system etc): PA System When will amplified sound/music he heard? Time from: 7a until: 12:noon amps needed *(15 or 100)* ✓ Note: 100 amp electrical service requires a certified electrician to operate.	(Yes)	No
Will there be any entertainment apparatus? (Operator to provide proof of insurance) [ ]Bounce house [ ] Climbing wall [ ]Ropes Course [ ]Other: _____ Name of Operator: _____	Yes	(No)
Will there be any vendors at this event? (No glass or alcohol permitted) If "yes" please note the number of vendors anticipated: 2-3 (submit a, separate, complete list) Does your event include food concession and/or preparation areas? If yes, please describe how food will be served and/or prepared: food is catered	(Yes)	No
Will event require that any part of the Park remain closed beyond the normal time of opening? Note: Park gates will not remain closed beyond normal opening time for any event with less than 1,000 people. All races with less than 1,000 people at One Mile must start before 8:30am. **(Subject to approval by the General Services Department Director and/or Senior Park Ranger.)** If "yes" please state which gate(s): _____ Time of closure from: _____ until: _____	Yes	(No)
Will there be early entrance into the Park for setup? If "yes" when will monitors be at their position(s)? Time from: 6 am until: noon Note: Gate Monitors are required at the entrances and exits for early Park entrance. An additional fee may be charged for early entrance	(Yes)	No
Will event require over night camping for security purposes? (authorized for a maximum of two people, 12R.04.340 CMC) If "yes" how many security personnel will be required? _____	Yes	(No)
Portable Restrooms: You are required to provide portable restroom for events with 200+ participants at your event, in the immediate area of the event site which will be available to the public during your event. Restroom Company Ben Toilets Phone Number _____ Location of portable restrooms _____ Note: Restrooms shall be removed within 24 hrs after conclusion of event.	(Yes)	No
Sanitation and Recycling: As an event organizer, you must properly dispose of waste and garbage throughout the term of your event and immediately upon conclusion of the event the area must be returned to a clean condition. ***For events with 200+ participants, additional trash and recycling cans are required.*** Number of Trash Cans _____ Number of Recycling Containers _____ Sanitation Company _____ Phone Number _____ Note: Sanitation containers shall be removed within 24 hrs after conclusion of event.	Yes	(No)
Will your event include the use of any signs, banners or decorations? (Please see 'Conditions For Park Use') If yes, please describe type and location: Course marking + mile signs Note: All signs and banners shall be free standing and not affixed to Park property.	(Yes)	No
Will water be needed during your event? Please provide your own hose and on/off switch. No hose bib is available at One Mile Recreation Area. Note: Please request a water coupler key for City Plaza, Children's Playground, and Cedar Grove.	Yes	(No)
Do you request irrigation to be turned off before and during your event?	Yes	(No)

CITY PLAZA ONLY: Vehicles are not allowed in City Plaza. Loading and unloading must occur from the streets. Meter bags for unloading and loading **only** may be obtained from the City by calling (530) 896-7800.

Will vendors be placed on the perimeter sidewalks? If yes, a Vend, Peddle, Hawk permit must be obtained from the Engineering Division at 411 Main St, Chico, (530) 879-6900.	Yes	No
Will City street closure(s) be needed? A separate permit must be obtained from the Engineering Division at 411 Main Street, Chico, (530) 879-6900.	Yes	No

BPPC Staff Report — Meeting Date June 30, 2014

DATE: 5/14/14

TO: Bidwell Park and Playground Commission (BPPC)

FROM: Theresa Rodriguez, Administrative Assistant

SUBJECT: Run The Bump- Run/Race

REPORT IN BRIEF:

Applicant (Ready2Run) requests permit for a trail run that essentially follows the "Bidwell Bump" route from the Five Mile Recreation Area. The "Bump" route crosses the creek and returns on the south side of Upper Park. This is the 1st year of the event. Requires BPPC consideration as it requests use of a non-intensive use area. The event will use existing trails.

Recommendation: Conditional approval of permit and modification of proposed route.

Event Details

Date of Application	03/10/14
Date and Time of Event	08/30/2014 8:00 A.M. – 1:00 P.M.
Event Name	Run The Bump Run
Applicant Name	Ready2Run / Shawna Hambleton
Description	Run/Race
New Event? / # years?	New event
# Participants	100 or less
Reason for BPPC Consideration?	Not an intensive use area (The race is outside the standard course – uses Middle and Upper Park trails).
BPPC guidance	Assorted Bidwell Park Master Management Plan (BPMMP) goals apply to this activity. As a new event, we note some pertinent ones below: O. RA-2. Manage recreational activities and facilities according to the allowed uses defined for each Zone: Lower, Middle and Upper Park. Base Park management decisions regarding recreation use intensity on the underlying natural resources within the relevant Park area. Running is considered a permissible non-intensive use in Upper Park (3.6.3.1). O. RA-3. Manage recreational facilities/events to avoid or minimize conflict between different Park users. O. RA-4. Balance recreation activities and facilities for the City of Chico among all parks, consistent with the type and intensity of uses allowed for each park. Bidwell Park, despite its substantial space, plays an important role in preserving natural and cultural resources in the City and region. It should not be considered available space for all recreation activities, especially those that may be placed in more appropriate parks. O. RA-5. Achieve a balance between recreational uses of the Park and protection and conservation of natural ecosystems and cultural resources. Consider recreational uses that do not substantially detract from the natural resource functions and are consistent with the designated level of natural resource protection for the area. O. PRU-2. Provide for compatible recreation use levels and patterns while preserving the natural character and ecological resources of the Park. Goal Upper: Retain Upper Park's habitat value and wilderness character while providing managed access to nonintensive recreational and education opportunities.

	O. Upper-2. Formalize the role of Upper Park as a protected area for non-intensive recreational uses. O. Upper-7. Emphasize non-intensive wilderness compatible recreation in Upper Park.

Discussion

The Bidwell Park Master Management Plan (BPMMP) provides some objectives that may aid the BPPC in consideration of this request (see above). Running is an acceptable use in the Park, and usually considered non-intensive; however, events can change the character of the activity. Permitted uses have an obligation to ensure that the activity will not impact the resources of the Park. The route follows the Bidwell Bump route. The nature of the event (race, with a relatively large number of people means potential impacts on the Park greater than individuals trail running in the Park. Staff discussed with the applicant the difficulties with EMS access, extraction, and response on the Southern part of Upper Park. The trails on the south side of Upper Park are narrow, and provide few alternatives for other park users. The difficult section just before the golf course is very rugged (would be near the end of the race). Better vehicle access on the North and wider trails and alternative trail options make accommodating the event there easier to support. Most trail runs in Upper Park have only been on the North side.

Staff suggested to the applicant that the BPPC may consider an alternative route(s) that may be restricted to just the north side or with a second creek crossing near Day Camp that would return runners to the North side of the road and eliminate some of the hazards near the golf course.

Because of the challenging logistics on putting on such an event and anticipating concerns of the BPPC, Staff requested that the applicant provide additional information: 1) Demonstrate experience with similar events; 2) Verification that applicant insurance or resources would pay for emergency response in case of accident or injury; 3) if the event has any component to park (donation from proceeds or from individuals, or provide volunteer efforts)? 4) Applicant should be prepared to provide an alternative northern route. As of the time of this report, we have not received a response, but anticipate that the applicant will be prepared with the information at the BPPC meeting.

Conditions

Staff recommends the following conditions:

1. Continued adherence to all park rules.
2. The City will require a higher limits for insurance coverage. Based on the current Muni Code language, the BPPC will need to approve those higher limits (Attachment C).
3. Maintain participants at 100 and below the participant cap of similar events (500).
4. Set-up vehicles shall be restricted to one vehicle and must travel on established gravel and paved roads and comply with all laws.
5. The applicant must provide sufficient monitoring to keep racers on the established route as well as direct traffic where the route crosses the road. (*Signage "should be designed to be more visible and located in several places."*) Signage must also be in place in order to ensure racers follow the established routes and also to notify other park users of the event.
6. Arrange for EMS support during the race.
7. Although unlikely, in the event that the Middle Park trails are closed due to wet or unsafe conditions, the race course will need to be altered accordingly and approved by the Park Division. The applicant has agreed to move the route to paved paths and roads in the case of a wet weather closure of the trails.
8. The applicant will need to do a final inspection of the race courses at the conclusion of the event and remove all signs and course markings as well as pick up any associated trash.
9. If the BPPC concurs, staff recommends that the Commission restricts the race route to the north side.

Attachments:

A. Application and Permit For Park Use
B. Course Map
C. City of Chico. Insurance Requirements - Information Sheet. PARK PERMIT. Major/Sports Event

Distribution: Shawna Hambleton

BPPC Staff Report

Meeting Date 6/30/14

DATE: 6/24/14

TO: Bidwell Park and Playground Commission (BPPC)

FROM: Dan Efseaff, Park and Natural Resource Manager

SUBJECT: Special Report: 2013 Year End Monitoring Report for the Peregrine Point Disc Golf Course

REPORT IN BRIEF:

Under direction from the BPPC and City Council, Staff worked with Outdoor Recreation Advocacy, Inc. (ORAI) toward the construction of a disc golf long course and installation of mitigation measures at Peregrine Point. The course was opened on February 12, 2011. As per the adaptive management model adopted for the project, the Annual Report (Attachment A) is the mechanism to document monitoring and recommendations for additional work and changes. Staff will review the report and present a task list to improve the course. Staff requests acceptance of the report as it recommends a notable change to the course with the creation of alternative holes or targets.

Recommendation: 1) Review and provide input to Staff, and 2) Accept the 2013 Report.

Attachments:

A. 2013 Year End Monitoring Report for the Peregrine Point Disc Golf Course (large report with Appendices).

Distribution:

ORAI

2013 Year End Monitoring Report for the Peregrine Point Disc Golf Course

Upper Bidwell Park, Chico, California

June 15, 2014

Prepared by: Dan Efseaff, Park and Natural Resource Manager

City of Chico

Public Works Department – Parks Division

965 Fir Street
Chico, CA 95927

Phone: 530-896-7800
Fax: 530-895-4731

www.chico.ca.us

Table of Contents

List of Tables

List of Figures

List of Appendices

Appendix D – [NSR]. North State Resources. 2013. Peregrine Point Disc Golf Course Botanical Monitoring. NSR No. 51325. Christine Hantelman and Paul Kirk. November 12, 2012. Chico, CA.

Appendix E – [NSR]. North State Resources. 2012. 2012 Peregrine Point Disc Golf Course Oak Tree Assessment and Monitoring Report. NSR No. 51325. Scott Gregory. December 11, 2012. Chico, CA.

Appendix F – Statistical Analysis

Appendix G – Example of Statistical Analysis of Broken Branches Comparison between Years

Acknowledgements:

We wish to thank Nancy Carter and Katharine Gray, CSU Chico, Mathematics and Statistics Department – Provided extremely helpful guidance in the statistics comparisons between years.

Suggested citation:

City of Chico. 2014. 2013 Year End Monitoring Report for the Peregrine Point Disc Golf Course. Chico, California. Prepared by Dan Efseaff. June 15, 2014. Public Works Department, Parks Division. Chico, California.

I. INTRODUCTION

The Bidwell Park and Playground Commission (BPPC) and Chico City Council have directed Staff to work with Outdoor Recreation Advocacy, Inc. (ORAI) toward the construction of a disc golf long course and installation of mitigation measures at the Peregrine Point Trailhead Area. The course is located in Upper Bidwell Park off of Highway 32.

An operating agreement developed between the City of Chico and ORAI helps implement the disc golf course development, operation, and mitigation measures. Approximately 79 mitigation measures (Exhibit B in the Operating Agreement) were identified as part of the environmental review for the Bidwell Park Master Management Plan (BPMMP) (EDAW, 2009). ORAI will pay up to $5,000 annually toward completion of monitoring costs, and will complete maintenance and repairs to the course as needed.

ORAI began course development on September 1, 2010. As part of the project, the City of Chico developed a monitoring plan for the site (City of Chico, 2011). The monitoring plan articulates the adaptive management approach, and outlines the monitoring framework to evaluate the operation of the Peregrine Point Disc Golf Course. Monitoring provides the basis for assessing impacts associated with implementation and operation of the project and developing remedies to minimize those impacts.

Key functions of this year end monitoring report are to:

- Communicate implementation activities,
- Review monitoring results and project activities,
- Document the completion of project milestones,
- Point out salient monitoring results,
- Evaluate the effectiveness of monitoring activities and identify data gaps that require additional action or consideration.
- Identify potential challenges or objectives for the upcoming year, and
- Recommend specific actions (adaptive management recommendations) on any aspect of the program for the following year.

ORAI will also communicate issues regarding course repairs or resource impacts to the City. The City or consultant hired by the City will collect data and provide annual reports on the project. The City or outside consultant will invoice ORAI for monitoring work. Annual reports will be submitted to the BPPC and made available to the public.

The Monitoring Plan (City of Chico, 2011) outlines an adaptive management framework that guides this project and should be referred to for details. As part of the adaptive management approach, we anticipate that the monitoring approach and site remedies may evolve over time as our understanding becomes more refined. Data collection frequencies, intensity, and protocols may change and future updates will reflect those changes. Based on the findings of the monitoring, modification to this program or the need to continue it should be considered after the 5th year.

A. Monitoring Requirements

This program proposes a series of monitoring efforts to match the requirements of the BPMMP mitigation measures (Table 1) and to also aid in site management. Several measures applied during construction have been completed or are not applicable and have been removed from the active list of mitigation measures (Appendix A). These include Air Quality, Cultural Resources, Hydrology, and Noise. Biological measures that applied only during construction (exclusionary fencing, vernal pools, birds, etc.) have also been removed.

All of the remaining active measures are related to biological resources, and though some may have been completed, they are subject to continued monitoring (the measures marked as "completed, on-going monitoring required," are subject to inspection). Approximately, 14 mitigation measures (total of 77) are the main focus of this Monitoring Report (Table 2).

Table 1. Tally of the Status of Mitigation And Monitoring Measures for the Peregrine Point Disc Golf Course (4/11/12).

Mitigation	Total	Not Applicable	Completed	In Progress	To Be Determined	Not Completed
Air Quality	11	4	7	-	-	-
Biological Resources	52	13	17[a]	16	6	-
Cultural Resources	9	4	5	-	-	-
Hydrology	1	1	-	-	-	-
Noise	3	-	3	-	-	-
Traffic	1	-	-	-	1	-
Total	77	22	23	16	7	-

[a] Tasks noted as completed may be split into ones that were required during construction and no further action is needed and ones that must have on-going monitoring to make sure that they are completed (for example, signs are completed on site, but must be monitored to make sure that they are replaced if they are removed. Nine items are completed but require on-going compliance monitoring.

B. Sampling Area

Monitoring occurs within the defined area of the Peregrine Point Disc Golf course (Figure 1). Monitoring of other areas of the site are beyond the scope of this effort. Fairway areas were developed geometrically using GIS techniques (Chico 2010), with assumptions made about the range of disc throws and angles. The shape was modified based on the position of trees (open sites tend to have wide fairways and ones with a lot of trees, narrow). This approach provides a reasonable approximation of fairway locations and where most of the play may occur.

Table 2. Summary of Mitigation Measures Related to Long-Term Monitoring.

Topic	Mitigation #	Description/Goal	Trigger	Remedy
Butte County Checkbloom	BIO-1b-f	Adopt an Adaptive Management program to document changes over time.	Start of project.	Role and adaptive management program developed in this document.
	BIO-1b-g	Long term maintenance of the same number and approximate extent of Butte County Checkerbloom as the 2005 survey.	Data indicates a decline in existing populations after implementation.	Relocation of trails or disc golf structures.
Bidwell's knotweed	BIO-1d-a	Use a habitat approach to minimize impacts on wildflower fields.	High fluctuation in annual population makes tracking difficult.	Minimize impacts to wildflower fields.
	BIO-1d-e BIO-1d-f (remedy)	Document and monitor changes in existing population.	Monitor annually. Decline in number or extent of existing populations.	Implement Plant Objective O.P-7 and Plant implementation strategies and guidelines I.P-3 and I.P-4 of the BPMMP. Relocation of trails or disc golf structures in vicinity of populations or other management strategies to benefit the plant.
Oak Woodland	BIO-3c-b	Decommission trails in oak woodlands that are part of a site-specific Park Improvement project.	Monitor annually	Reclaim using barriers. Decommission unused trails, identify needs annually.
	BIO-3c-i	Protect tree trunks without damage to the root zone and preserves visual character of the site.	Monitor annually	Install barrier protection measures and consider alternative holes.
	BIO-3c-j	Minimize soil compaction around tee pads and on trails under oak driplines.	Monitor annually	Apply layer of woodchip mulch around the tees and narrow foot traffic with barriers.
	BIO-3c-k	Determine if any unavoidable impacts are occurring as a result of site use.	Twice annually	Replant oak woodland habitat in suitable areas (l) according to conditions outlined in BIO-3c: l, m, n, o, p for a period of 5 years.
Wildflower Fields	BIO-3d-f	Reclaim existing trails not retained as part of site-specific Park Improvement Projects.	Monitor annually	Reclaim using barriers to discourage use of abandoned trails. Reseeding may be considered over time.
Signage	BIO-1b-d BIO-1d-b BIO-3c-h BIO-3d-g	Maintain permanent signage to inform users of the presence and sensitivity of 1) Butte County Checkerbloom, 2) Bidwell's knotweed and wildflower field, 3) value of native oak trees and woodland, and 4) presence and sensitivity of the wildflower field community, discourage off trail use.	Monitor annually	Repair or replace signs.

Figure 1. Peregrine Point Disc Golf Course (Long Course) (City of Chico, 2011).

II. SUMMARY OF RESULTS

This monitoring report is based on the following reports related to monitoring at the site:

- Wildflower and survey (NSR 2013a),
- Blue oak monitoring (NSR 2013b),
- Site evaluation and ranger observations (by City of Chico staff), and
- Annual report (ORAI 2013).

A. Course Improvements and Activities

1. Signage - In Fall 2013, the City installed a sign that outlines basic rules, etiquette, park rules, and stewardship, and a bollard with a closed sign on the entrance to Hole 1 that would be used when the course is closed.
2. As per recommendation last year (Chico 2013a), Priority 1 (Priority) and Reference tree locations are geo-referenced.
3. Rangers continued education and enforcement efforts for all of Upper Park to increase compliance with wet weather closures.
4. Chico Outsiders/ORAI noted the following efforts (Appendix B - ORAI 2014)
    a. Course Maintenance:
        i. ORAI formed a new Peregrine Point Maintenance Committee to help keep the course clean and form work parties for course improvements. ORAI reported over 300 hours of volunteer time.
        ii. Efforts focused on unwanted trail abatement, litter removal, tee pad maintenance, mulch spreading, fixing rail fencing around OB's and cleaning any graffiti from benches and baskets.
        iii. ORAI also noted that volunteers would also educate the public on how to leave a minimal impact while enjoying their day at the course.
    b. Course Improvements:
        i. Installed more arrow painted rocks to help newcomers to stay on the main trails in the fairways and between targets and tee pads. They noted that they observed minimal new trails. ORAI attributed this to trail abatement (split rail fences, painted arrow rocks, or stacking natural debris in spur trails).
        ii. ORAI noted that the committee's new "educate while you play program" seemed effective.
5. The number of targets that require mulch is 6 targets. We recommend mulch on 8 tees as well (Table 3) as they are within the dripline of oak trees.
    a. Last year's report noted that narrow functional trails (less than 4 -5 ft wide) do not warrant mulch placement (Chico 2013). The report also recommended that the tee for hole 18 to receive a minor amount of mulch, this was also removed.
    b. In early 2013, Staff imported clean oak chips onto the site for ORAI to distribute near holes 1, 14, and 17.

Table 3. Tees and Targets within Oak Tree Drip-lines.

Hole Number	Required Tee	Recommended Target	Easy Access
1	-	+	+
9	+	+	-

Hole Number	Required Tee	Recommended Target	Easy Access
10	-	+	-
11	+	-	-
12	+	-	-
13	+	+	-
14	-	+	+
15	+	-	+
16	+	+	+
17	+	-	+
Total	7	6	6

Notes: No (-). Yes (+). Bold indicates more than 3 yards required

6. In 2013 the BPPC adopted a new wet weather plan (Chico 2013b) that lays out a new assessment route that is on the long course (most of the old route stayed on the former short course) (Figure 2).

B. ORAI Annual Report

ORAI provided a brief report (Appendix B) summarizing activities at the course including volunteer efforts and costs associated with payment for site studies.

1) Usage:
   a) ORAI estimated usage up by approximately 25% from the previous year.
   b) In 2013, 9 exclusive use days with 8 tournaments. Tournaments brought in between 25 and 75 people.
   c) ORAI hosted the first official Professional Disc Golf Association (PDGA) tournament (The Flight of the Falcon) to ever be held at the Peregrine Point disc golf course to favorable reviews.
   d) Disc Golf Course Review (DGCR) named the course as #7 on the top ten best courses in California (out of 273).
2) Finances:
   a) ORAI has expenses of $8,146.15 ($5844.15 for environment studies, $1462.00 for insurance and $840 for course maintenance and improvements).

C. Staff Observations, Site Evaluation, and Photo Point Monitoring

The Site Evaluation allows Staff to assess compliance with mitigations and observe any improvements or areas of concern (Chico 2011). For 2013, photo points were collected as part of the 10/29/13 site visit (Appendix C).

In addition, Rangers collected observations of vehicles in parking lots (Table 4, Figure 3). In comparison to previous years, this effort was greatly curtailed following the budget cuts in July 2013 (no observations in July). While not all vehicles on the site are related to disc golf, it does provide a sense of use and compliance with wet weather closures. Note that Rangers sometimes made multiple observations per day.

Figure 2. Peregrine Point Disc Golf Course – Tree Canopy and Wet Weather Course Assessment Route.

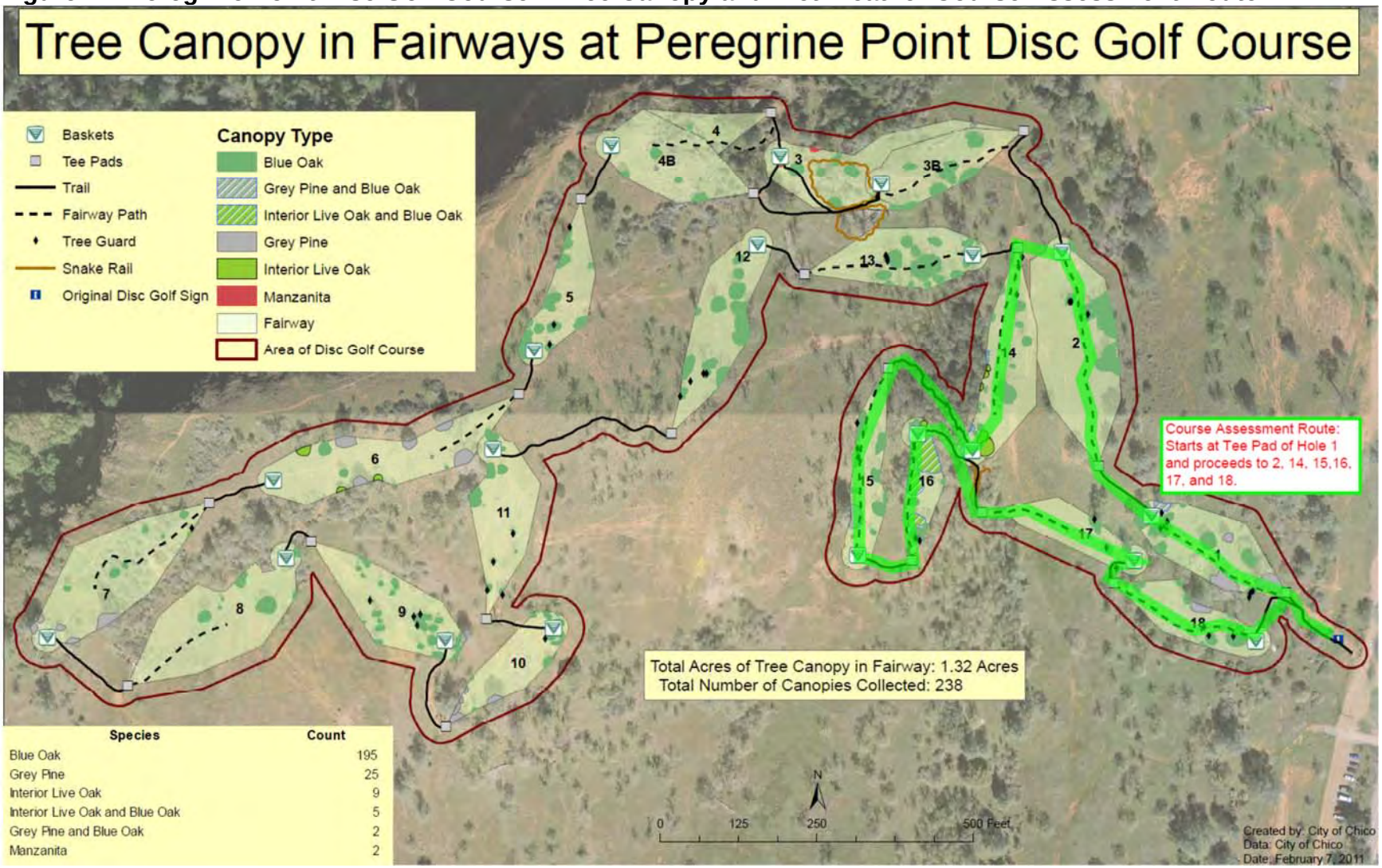
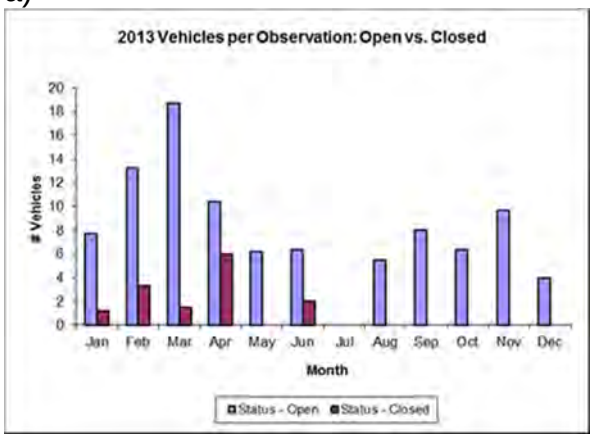


Table 4. 2013 Summary of Ranger Vehicle Observations.

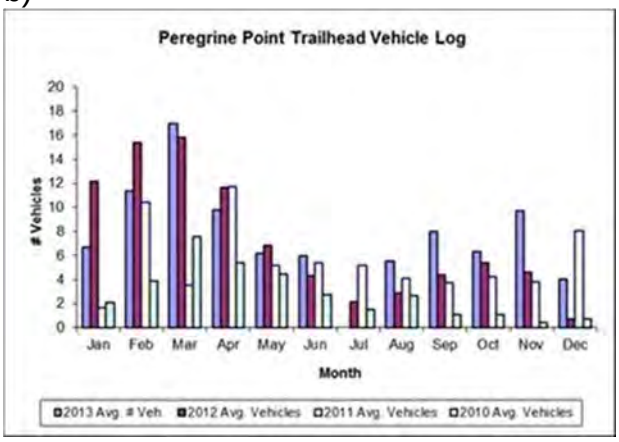
Ranger Report - Disc Golf Log 2013														
Variable	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Annual Trend**	**Total/**
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**		**Ave**
Status - Open														
N (Observations)	25	13	17	18	5	12	0	2	3	3	14	1		**113.00**
Average # Vehicles	7.76	13.23	18.76	10.44	6.2	6.33		5.5	8	6.33	9.71	4		**8.02**
Status - Closed														
N (Observations)	5	3	2	3	0	1	0	0	0	0	0	0		**14.00**
Average # Vehicles	1.2	3.33	1.5	6		2								**1.17**
Total Observations	30	16	19	21	5	13	0	2	3	3	14	1		**127**
2013 Avg. # Veh.	6.67	11.37	16.94	9.81	6.20	6.00	N/A	5.50	8.00	6.33	9.71	4.00		**7.54**

Figure 3. a) 2013 Vehicle Observations, b) Comparison of Vehicle Averages by Year.

a)



b)



Consistent with last year's observations, the most cars observed were generally during the rainy season, with March, February, April, November, September, and January showing the most use (Figure 3). The numbers of cars per observation was suggestive of a difference ($p < 0.04$) between wet season ($\bar{x}$= 10.1) versus dry season ($\bar{x}$= 6.3).

The average number of vehicles observed may be summarized as follows:

- "Open day" observations 10.4 vehicles (n = 126, std dev, 8.7);
- "Closed day observations 2.4 vehicles (n = 18, std dev, 3.7).

This difference was significant ($p<0.001$). The open day average was up from 6.8 vehicles and closed day average was up from 1.6 vehicles in 2012.

The photo-point monitoring for 2013 (Appendix C) yielded only a few notable observations. Bare ground is pronounced in most photos. At H10 (P1 and P2) shows the result of a grey pine that fell across the pad removing the branch on a blue oak just north of the tee pad. The failure was not related to disc golf play. The limbs provided material for the "tee-pee" that was created and later removed (Figure 4a). Areas of bare

ground looks comparable to last year (another dry year). Bare ground is from additional use, low rainfall (early use, and consequently less vegetative cover). Although some weathering, vandalism, and graffiti have occurred, course features are intact.

Figure 4. 2013 Site Photographs.

a) Park users built a structure on-site from debris from a fallen tree. The structure was removed and material spread around.

b) Park staff installed a bollard sign at the course. On closed days the sign and bollard block the path to Hole 1.

D. Butte County Checkerbloom and Bidwell's Knotweed, and Wildflower Field Surveys

In Spring 2013, North State Resources, Inc. (NSR) surveyed the extent and distribution of Butte County Checkerbloom and Bidwell's Knotweed (NSR 2014). Figure 5 and Table 5 presents a comparison between years. No area data was collected for wildflower fields in 2013. NSR (2014) notes that the protocol to map the "wildflower fields" needs to be developed in order to minimize ambiguity. NSR (2014) recommends that the protocol should include criteria such as floristic composition, patch size, patch density, and minimum mapping unit.

Table 5. Preliminary Comparison of Key Data from Botanical Monitoring.

Resource	Variable	Sub-variable	2010	2011	2012	2013	Trend
Bidwell's Knotweed							
	# Patches		10	10	18	16	
	Area (acres)		3.16	4.62	1.6	1.5	
Butte County Checkerbloom							
	# Occurances		62	132	114	180	
		# units reproductive	-	64	59	69	
		# units vegetative	-	68	55	111	
	# Racemes			145	247	187	
		# racemes in flower/fruit racemes	-	50	27	26	
		# racemes in bud	-	39	132	85	
		# racemes nipped	-	56	88	76	
Wildflower Fields							
	# Patches		-	-	17		
	Area (acres)		-	-	4.6		
Notes: Starting in 2011, more detailed information was collected and is comparable to data collected in later years.							
Wildflower field boundaries marked in 2011, but not as polygons. Staff will explore digitizing them to obtain areas.							

E. Blue Oak Woodlands

1. Transect Sampling

An interrupted belt transect (4 permanent 25 m x 4m quadrats, 9 trees) provide a long term view of changes on the site (NSR 2012b, Foothill 2012), was repeated in 2013 with no significant or remarkable differences observed.

2. Examination of GIS Analysis of Blue Oak Woodland

The monitoring plan (2011) notes that this method is related to long-term monitoring and utilized after 5-10 years. The base map (2009 aerial photography) will be used for future comparison. Figure 2 provides information related to canopy on the fairways. No quantitative comparisons are possible until the next set of aerial photographs become available. However, the reader may make informal historical comparisons using Google Earth.

3. Assessment of Blue Oaks within Course Boundaries

Comparison between Priority 1 trees (on the disc golf course) and reference trees (off the disc golf course) could provide a more immediate comparison between course impacts. The comparison of trees between years provide a view into potential long term trends on the site. This is the first year with at least 3 years of data. Figure 6 depicts 2013 tree condition and locations.

Figure 5. Peregrine Point Disc Golf Course – Knotweed and Checkerbloom Locations.

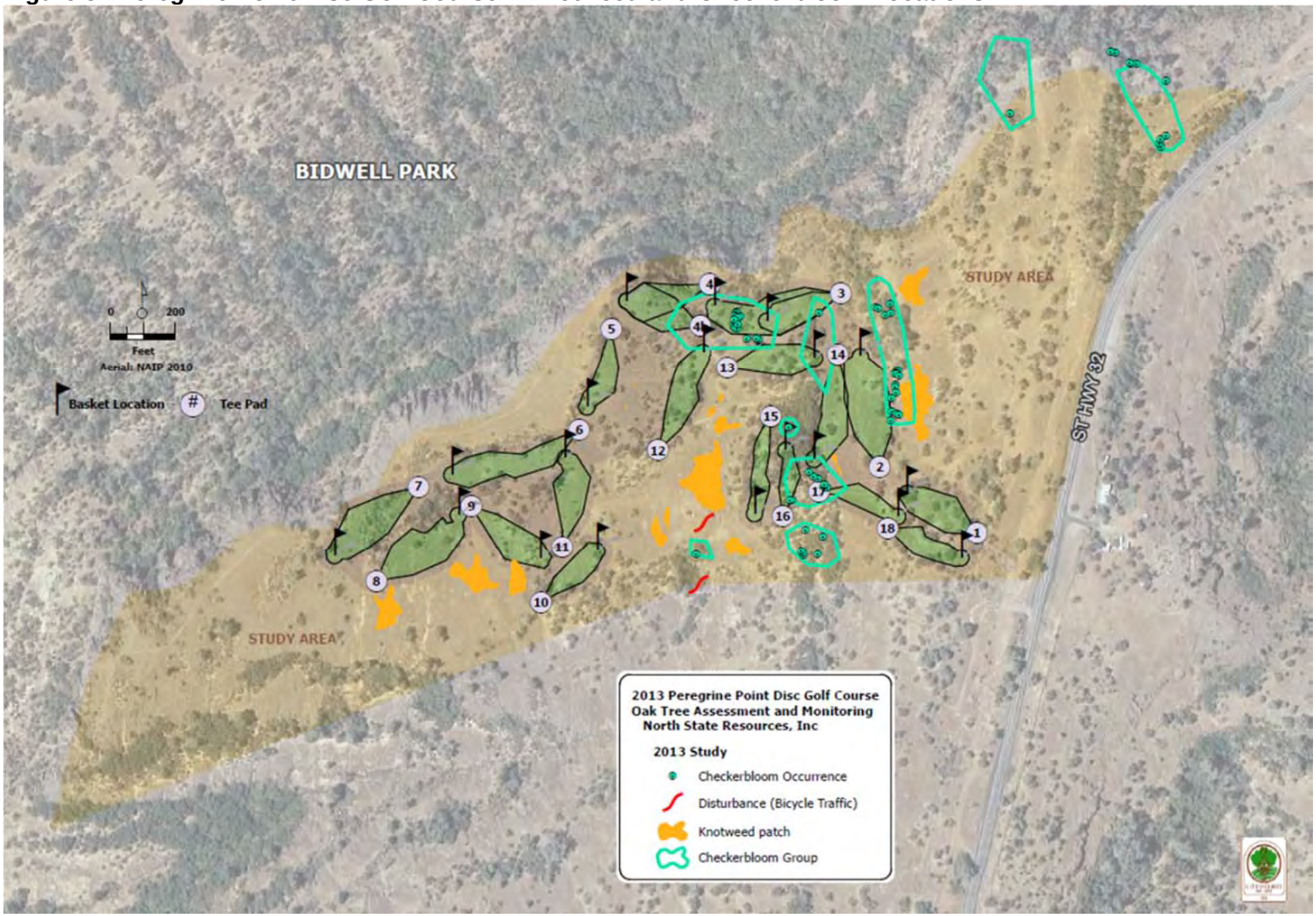
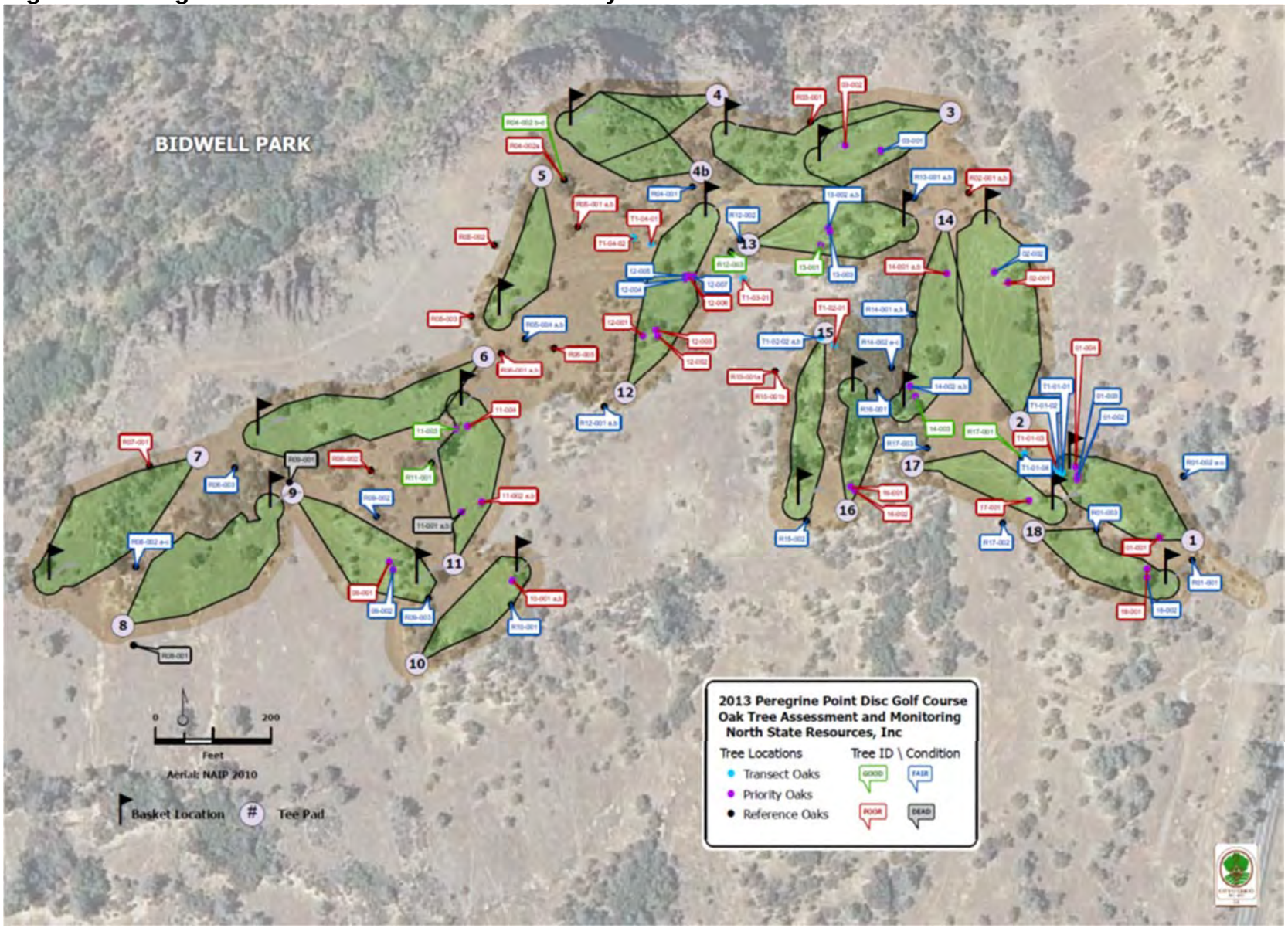


Figure 6. Peregrine Point Disc Golf Course - Priority 1 and Reference Tree Locations and Status.



a) Comparison within Year

NSR (2013) provides summary data (distribution in classes) and the data for individual trees. Table 6 provides some basic statistical analyses using ANOVA techniques (Appendix F).

Table 6. Comparison of Priority and Reference Trees Using ANOVA Based on 2013 Observations.

Variable	Reference Tree (n = 52)		Tree Priority 1 Tree (n = 38)		Statistically Different (p-value)	
	Ave	Std Dev	Ave	Std Dev		
Diameter at Breast Height (DBH) (ft)	10.10	4.83	10.94	5.92	No (p=0.45)	
Tree Height (ft)	19.67	5.79	20.55	6.56	No (p=0.51)	
Crown Width (ft)	20.60	10.74	18.34	7.92	No (p=0.28)	
Trunk Quad Impacts (#)	0.42	0.72	2.58	0.97	**Yes (p < 0.001)**	*
Damaged Bark Patches (#)	0.50	1.42	1.40	1.87	**Yes (p < 0.01)**	
Broken Branches (#)	3.90	3.29	6.53	2.57	**Yes (p < 0.001)**	*
Dead Canopy (%)	23.58	18.75	24.84	20.74	No (p = 0.76)	
Mistletoe presence	0.135	0.345	0.158	0.37	No (p = 0.76)	
Tree Condition (#)	3.37	0.66	3.53	0.73	No (p= 0.28)	

Note: Treated multiple stems as individual entries. Data from NSR 2013, statistical analysis printout in Appendix F.
* Statistically significant in 2012.

b) Comparison between Years

(1) General Summary

In 2012, we noted that the variation on these values was large and that time and further monitoring will indicate whether these impacts have long term detrimental effects. However with 3 years of data some trends are emerging. In 2013, one of the blue oaks (stems 11-001a and 11-001b) appeared to have died. The condition in 2011 and 2012 was poor, with quad impacts (2, 4, 4), damaged bark patches (0, 1, 3), and broken branches (4, 5, 9) increasing over the 3 year period.

We summarize the statistical differences ($p < 0.05$) between Priority trees and Reference trees for individual years in Table 7.

Table 7. Summary of Variables that Demonstrated a Significant Difference Since Sampling Began.

Year	Significant Variables (p > 0.05)			
	Tree Height	Trunk Quad Impacts	Damaged Bark Patches	Broken Branches
2011	+	+	+	
2012		+		+
2013		+	+	+
Total	**1**	**3**	**2**	**2**

(2) Cumulative data analyses

However, with three years data, we may be able to now examine some trends associated with disc golf play that may not be apparent from just a look at the year to year differences.

To examine the question of whether there are differences between Priority and Reference Trees (Ind_Course) over the sampling period (Year) and any interactions, Staff consulted with Professors Nancy Carter and Katharine Gray from CSU Chico's Mathematics and Statistics Department.

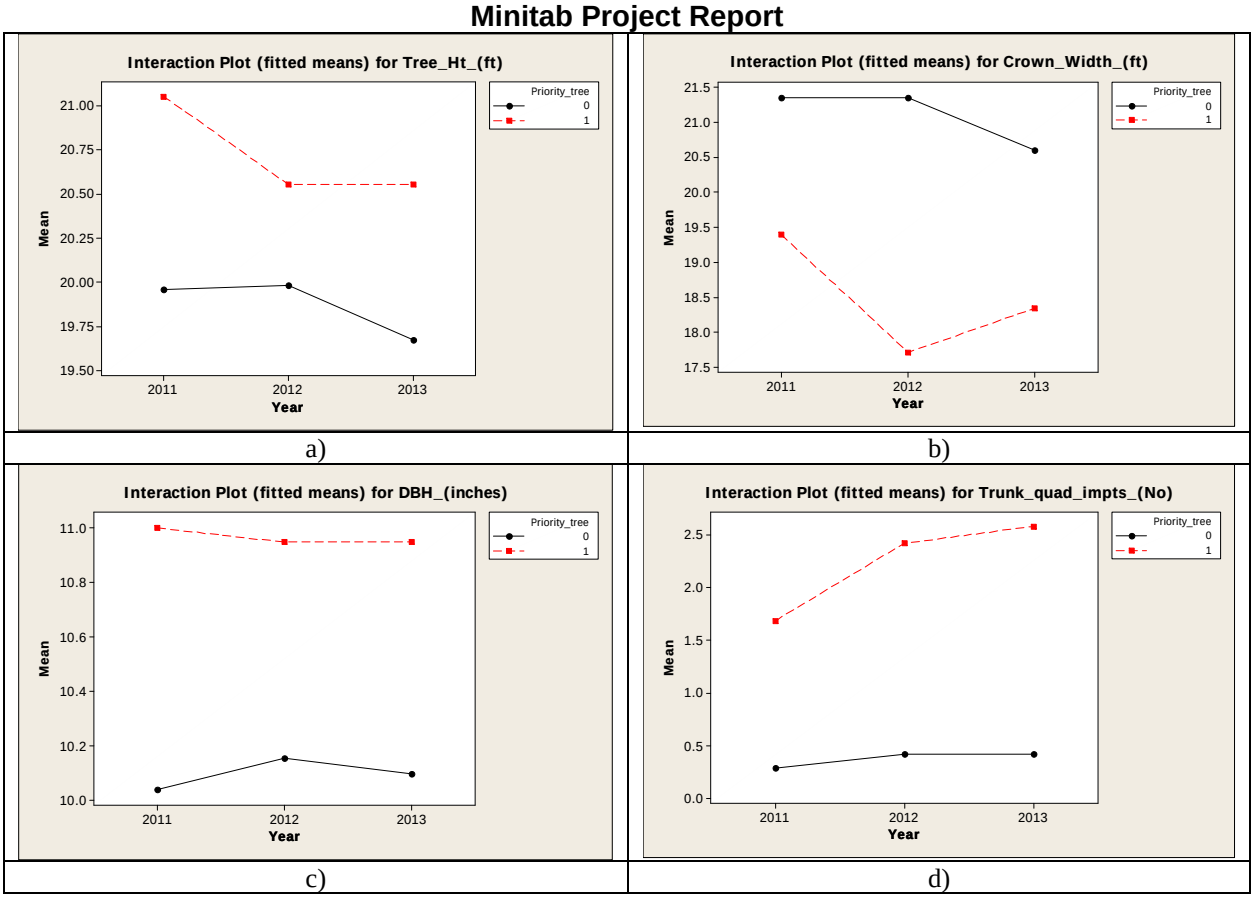
Using the General Linear Model (to first see if there are any statistical differences) and following up with a Tukey test (using 95% Confidence Intervals to determine which ones are different and by how much), we found the following significant differences (Appendix G):

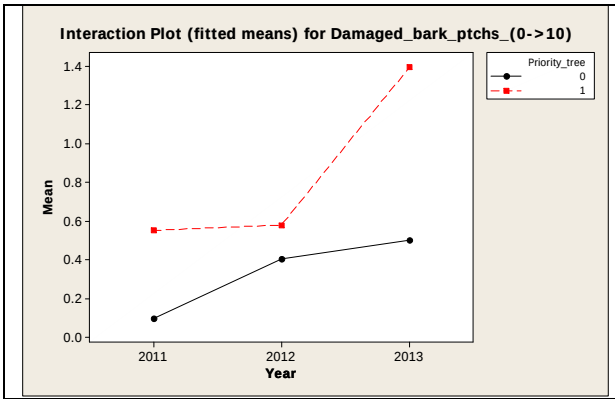
1. We expected several factors (below) to perhaps start off with differences based on the tree location that may be associated more with course layout (a confounding factor) than disc golf play and that these factors may be important to watch over time (i.e. disc impacts on branches, could narrow the width of trees). However, the direction of changes are concerning (especially for width):
    a. Tree Height – Priority trees are taller (0.85 ft) than reference trees although the gap narrowed in 2012 and 2013. Estimated tree height for all trees declined from 2011 (0.24 ft).
    b. Crown Width – Priority trees are narrower than reference trees (2.5 ft). Tree width for all is down from 2011 (no difference though between 2012 and 2013). While all trees have narrowed, the trees on the course have narrowed at a more rapid rate (the interaction of Priority tree by year were significant ($p=0.007$)).
    c. Diameter at Breast Height (DBH) – Priority trees are about an inch larger.
2. Trunk quad impacts (1-4 scale) – we observed statistically significant differences between priority and reference trees, year, and their interaction ($p<0.001$). While reference trees have remained statistically similar and flat, priority trees exhibit more quads impacted (2.29 more) and show increases over 2011 estimates (0.89 more quads).
3. Damaged Bark Patches (total number 0 to >10) – showed a marked jump in 2013 (more than doubled from 0.6 in 2011 to 1.4 in 2013). This rise compares to 0.4 for reference trees. Reference trees in 2011 and 2012 were similar.
4. Broken Branches (total number 0 to >10) – Reference and Priority trees were virtually identical in 2011. While all have increased over that time, Reference trees now have double the number of broken branches (this interaction is statistically significant ($p<0.001$)). Therefore, while both Priority and Reference trees sustained damage over time, it is clear (95% Confidence) that Priority Trees sustained damage at a statistically higher rate than Reference Trees.
5. Dead Canopy (5 classes) – no difference between the accumulated averages of Reference and Priority Trees ($p=0.71$). However, when we compare the repeated measures on individual trees in the two groups (pairwise comparison) we observed significant differences ($p<0.001$). Years also increased dead canopy ($p<0.001$), perhaps indicating 2 years of drought. Dead canopy increased at a fast rate for Priority Trees over Reference Trees.
6. Tree Condition (5 classes) – For all 3 years, Priority trees were in a poorer condition than Reference trees. While the difference may be small, it widened in 2013 (Figures 4 and 6).

Figure 7 provides a graphical representation of these variables. We should note that while some differences may be small and confounding factors may be at play (i.e. the course was not set up randomly), nearly all factors (except DBH) trend in a negative direction, strongly suggesting that disc golf play has had a negative effect on blue oaks that is increasing over time.

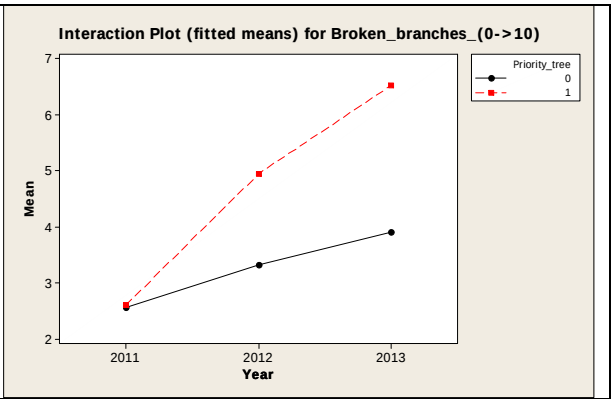
In order to potentially prioritize the holes for changes, staff completed an analysis of specific holes. However, as the remedies include a majority of holes, that analysis was not included.

Figure 7. Interval Plot Comparing Years and Priority (1) and Reference (0) Trees by a) Tree Height, b) Crown Width, c) DBH, d) Trunk Quad Impacts, e) Damaged Bark Patches, f) Broken Branches, g) Dead Canopy, and f) Condition.

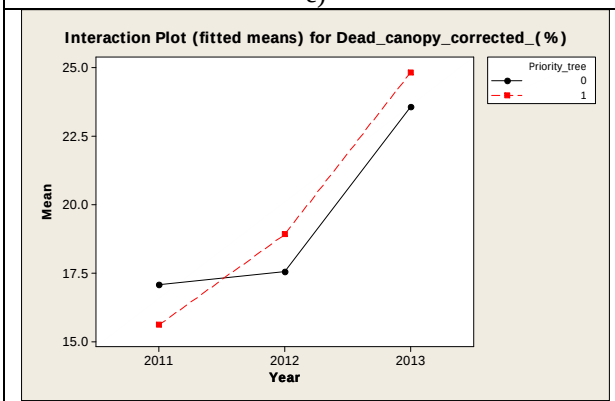




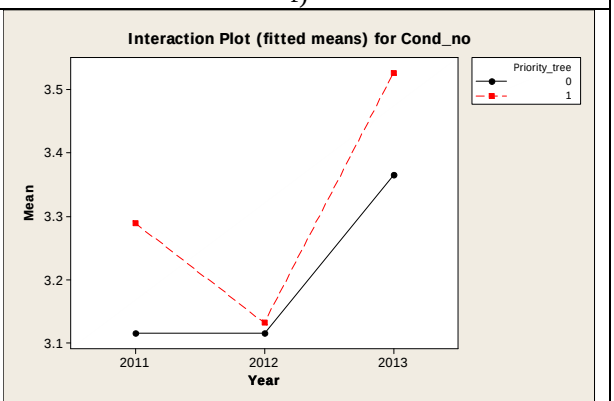
e)



f)



g)



h)

F. Data Handling and Storage

The City dispersed the draft botanical and oak reports to the BPPC in the monthly Division/Manager reports. The revised reports are attached (Appendices D and E) and available to the public through the City of Chico website (http://www.chico.ca.us/). Project derived GIS layers are submitted to the City's GIS department (and stored at CSU Chico's Geographical Information Center).

III. DISCUSSION AND EVALUATION OF DATA

Site Evaluation and Usage

1. The trend for wet weather compliance is good. The ratio between average number of vehicles between open and closed observations have gone from 2.3:1 in 2011 to 4.9:1 in 2012 to 4.2:1 for 2013.
2. Foot traffic caused by park visitors (disc golf play and other uses) has left bare ground in places. Some of this use directly impacts biological resources identified in the mitigation measures for the course (notably wildflower fields and Bidwell's knotweed). Soil erosion can result in the permanent loss of site productivity and habitat. While measures to define at least the start of pathways across fairways will help, some of the use is related to other park uses at the site.
3. The snake rail fencing on the course appears to be functioning well in narrowing trails and keeping users off out of bounds/sensitive areas, and has become less intrusive as it has weathered.

Butte County Checkerbloom and Bidwell's Knotweed, and Wildflower Field Surveys

1. Bidwell's knotweed was found in similar numbers as 2012 (more but smaller patches, suggesting retraction of previously occupied areas).
    a. Many of the plants were in flower, suggesting that sampling was well timed (NSR 2013a).
    b. NSR (2013a) noted trampling and erosion that appears to be associated with use by a mountain bike group.
    c. The dry winter may have also contributed to this reduced area.
2. The number of Butte County Checkerbloom occurrences increased in 2013 (180 in 2013 vs. 114 in 2012) while the plants produced fewer racemes (187 in 2013 vs. 247 in 2012) (NSR 2013a).

Blue Oak Woodlands

1. In 2013, quad impacts, damaged bark patches, and broken branches were significantly higher (see above) in priority trees than reference trees and all increased over 2012 levels. In general, impacts to bark and cambium cause additional stress on the trees (to repair), potentially provide a portal for pathogens or insects, and may make the trees more susceptible to mortality from other events (i.e. drought stress mortality).

   The increase in trunk quad impacts were so striking that we looked at the individual trees a little closer. About 55% (21 out of 38) priority 1 trees contained impacts on 3 of 4 quadrants, in contrast to only 1.9% (1 out of 51) of reference trees. This tree (R12-003) was thought to be a good reference tree because it was shielded by other trees in the fairway; however, the trees may not provide enough protection. The number of broken branches (10), damaged bark patches (5) and location center of the fairway, suggested that this tree should be converted to a Priority Tree.

2. Nearly all variables demonstrated a negative trend with trees exposed to disc golf play showing significant differences. For example, Priority trees exhibited a higher number of broken branches than reference trees (6.5 vs 3.9), representing an increase over 2012 (4.85 vs. 3.33). These values were virtually identical in 2011 (about 2.5).

   While some of the factors are important in themselves, they also may forecast trends to ecologically important outcomes (mortality, vigor, etc). For example, disc impacts may result in trunk impacts and broken branches which may in turn result in damaged bark patches (damaged cambium) and dead canopy and increasingly poor condition. The statistical differences that we detected may serve as an early warning before irreparable damage occurs.

A. Identification of Data Gaps

1. No GIS wildflower field data were collected in 2013, and a replicable protocol will have to be evaluated for future comparisons.

IV. FOLLOW-UP RECOMMENDATIONS

A. Findings and Course Improvements

A number of course improvements will be explored with ORAI in 2013, these include:

1. Course Features –
    a. Overall repair and clean up - Generally, the course is relatively free of trash and graffiti during most visits; however, encouraging a pack it in, pack it out mentality among visitors and regular clean-ups would be beneficial. We can work with ORAI volunteers on showing them other techniques to remove the graffiti on benches. However, they have been quite diligent in removing graffiti.
    b. Hole signs- ORAI proposed signs at each hole to provide a diagram of the hole. The sign would note any hazards, resource issues, stewardship reminders, and the hole sponsor. Staff would authorize the design, placement, and size of the signs.
    c. Alternative hole placement –
        i. Driven mostly by the trend on blue oak damage on certain holes (see below), Staff recommends working with ORAI in considering alternative hole/target placements at the following locations: 1,2,4 6, 7, 8, 9, 10, 11, 12, 14, 17, and 18. Other holes will be monitored and possibly subject to the tone pole testing.
        ii. Consultation with ORAI suggests that for some holes, a shortened hole may not meet objectives. Staff will work with ORAI on the placement and even setting up temporary tone poles to see how play might work.
        iii. All of the locations above will be set up inside the defined fairway of each hole.
        iv. The intent of the alternative hole is to provide recovery time and can be switched back, determined by the needs of each hole.
    d. Out of bounds areas – Signage and potentially moving the fencing will be considered at Hole 3 to reduce traffic thru the off limits area and along the northern OB fenceline.
    e. Living screens – (carried over from Chico 2013) If weather conditions are favorable, Staff will work ORAI to plant either a grey pine or buckbrush as a screen to protect either wildflower areas (to the left of the pad on Hole 14) or to protect blue oaks from disc impacts (on the southside of the target for hole 10)." Native grass plugs or seeding may also be help to define trail areas and will be examined.

2. Trails and fairway paths –
    a. Identify trails or paths that are widening and look at measures to minimize (less than 4 -5 ft wide) and multiple threaded trails and fairway paths. Although the nature of the game, means that some areas of multiple paths would be expected, some of the pathways on fairways (especially the initial area after the Tee pad) will be reviewed with ORAI with the goal of reducing the number and width of trails.
    b. During course construction, ORAI lined some trails between holes with rocks as a temporary measure to keep people on the trail. Since that time

the rocks have been kicked out of place. Staff recommends that rocks be rocks embedded in place to more permanently identify best routes. The work should occur in Fall 2014.

3. Butte County Checkerbloom and Bidwell's Knotweed, and Wildflower Fields
    a. Trampling and bike use from visitors appear to be the biggest threat to individual plants and populations. NSR (2013) noted that knotweed locations (POBI-11 and POBI-12) appeared to be damaged by mountain bikers riding thru the area and trespassing onto the adjacent private property. Installation of signage, repair of the fence and the measures above for trails will help.
    b. Despite those potential site by site issues, in general the course alignment seems to be working well from the standpoint of keeping disc golfers out of Checkerbloom and knotweed areas. However, trampling in the area between Hole 2 and 14 could be improved.

4. Invasive plant removal –
    a. Staff recommends that ORAI treat the infestation of barbed goat grass (*Aegilops triuncialis*) in the grassland area south of the 8th and 9th fairways and west of the 10th tee and north of a large wildflower field. Mechanical (hand pulling, hoeing, weed eating in the early flowering stage, or cut, bag, and remove) and herbicide application (before seed set) may be effective.
    b. Staff will also remove the single scotch broom (*Cytisus scoparius*) in the eastern end of the study area.

5. Blue Oaks –
    a. Impact protection: ORAI and Staff will review the placement of existing barriers and explore alternative trunk protection methods (cylinders of hogwire fencing, tomato cages, tree wrap, poles, etc.). Staff will work with ORAI on some demonstrations especially at Holes 2, 13, 15, and 16 on susceptible trees.
    b. Alternative hole placement: A proactive approach to minimizing impacts to the trees is to change the geometry (i.e. move the targets) of certain holes. While barriers may protect trunks, no easy solutions are apparent for protecting broken branches of priority trees, which increased from 2.69 (2011) to 6.5 (2013). The highest velocity and damage are to the trees that are closest to the Tee pads. This approach is reversible (seasonal changes already happen in the case of Holes 3 and 4).
    c. Mulch is used on site to mitigate for the amount of compaction under the dripline of oak trees at tees and trails (it excluded targets) (BIO 3C- j).
        i. Until a more permanent trail/service route can be constructed, it is not feasible to commission/decommission a temporary haul road (as was done during construction) to bring in mulch.
        ii. While vehicle access from the gate to staging areas (and wheelbarrows for distribution) is readily available for several holes on the upper area (1, 14, 15, 16, 17, and 18), access is not easy for the other areas on the "lower shelf" (9, 10, 11, 12, and 13).

iii. Another solution is to shrink down the area available (with fencing, brush or trail guides), reducing the area of compaction. This approach should be examined for feasibility in 2014 on the Tee areas for 9, 11, 12, and 13. The goal should be to minimize impacts within a 6 foot radius of the tree (McCreary 2011). This approach may not work with targets, and the targets for holes 9, 10, and 13 should also be examined and along with alternatives for reducing compaction.

d. NSR (2013) observed that one blue oak (11-001a and b) appeared to have died. This tree was part of the old course and was one of the most impacted trees on the course. If this is confirmed in this year's sampling, then as a 9 dbh tree, it would be subject to mitigation measure BIO-3cl (and subsequent measures m, n, o,p) and a 5:1 replacement / establishment ratio. Staff recommends that ORAI plant the replacements in fall 2014 near favorable locations near Hole 11.

The alternative hole placements and other actions are summarized in Table 8 and Figure 8.

Figure 8. Proposed Alternative Hole Placement Peregrine Point Disc Golf Course.

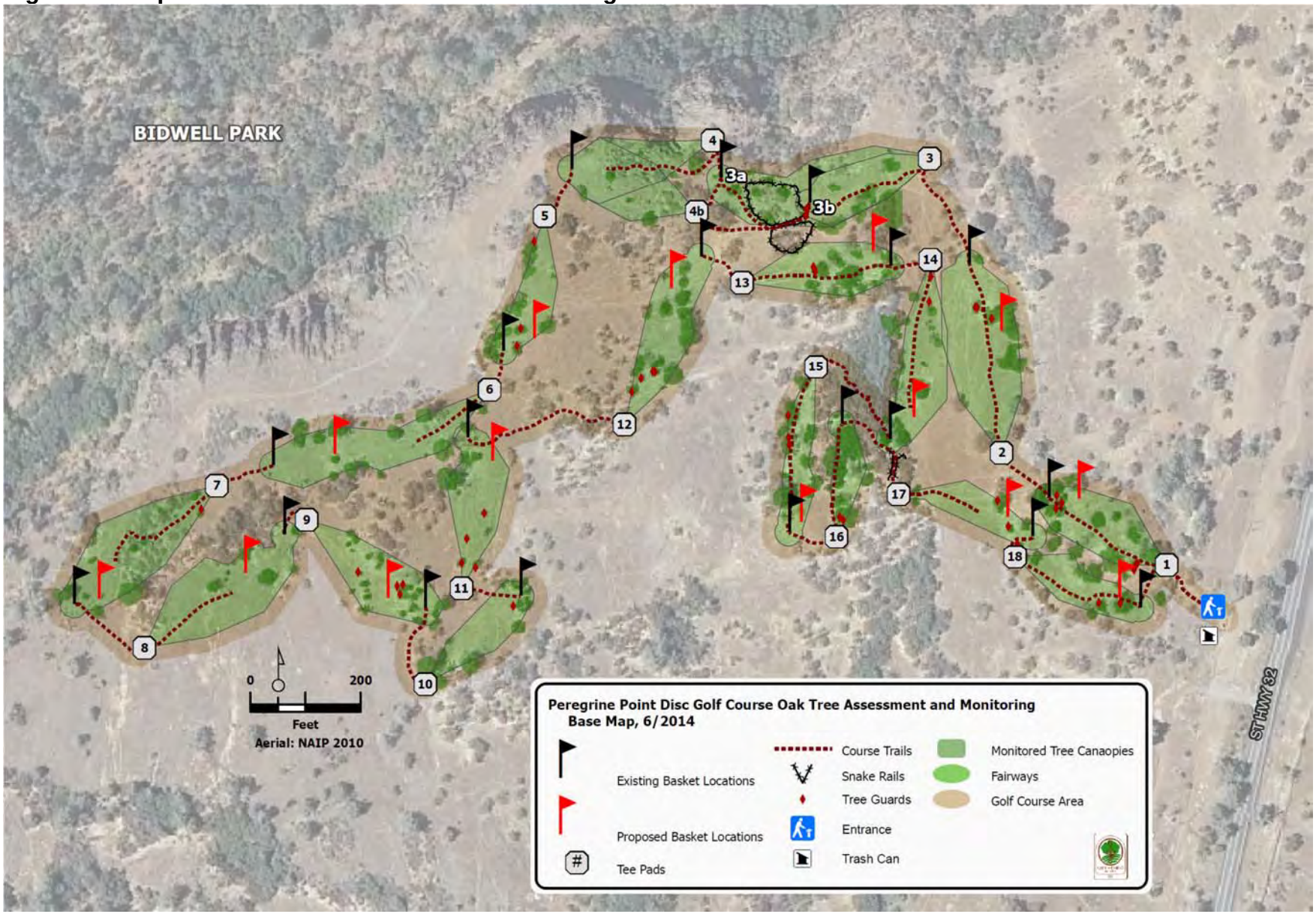


Table 8. Summary of Alternative Hole Placement and Other Specific Actions at Holes.

Hole	Issue	Action	Priority	Rationale
1	Target is located within a small grove of large oaks. Drives impact oaks more than putting.	Create alternative target in front of trees and to the right (toward tee).	High*	Repeated impacts on bark and branches are evident. This would be a good test site to see if approach is valid.
2	Impacts to branches and trunks evident. Trees are in poor condition and impacts may hasten their demise.	Create alternative target. Add signage. Set up anchored cages around seedlings. Apply more split rail and embed rocks to better define trail.	High*	Narrows width of fairway and better separate foot traffic from Hole 14 thereby minimizing traffic in wildflower field. Lessens damage to oaks. Make sure placement does not impact nearby checkerbloom patch (CG-8).
3	One of the largest areas of bare ground on site (triangular area 50 x 90 feet).	Education and change configuration of Out of Bounds Area and monitor.	Medium	Reduce area of bare ground, walking thru OTB area and split trails to next hole. If measures do not work consider change to use more protective winter fairway year round to lessen the chance of discs falling into the areas with checkerbloom.
4	Erosion on hillside and large bare area near target.	Allow play from the Winter tee pad (fairway) year round. The Summer tee pad would remain closed for play in winter. Change signage to note "Year-round" fairway.	Medium	Change in operations, allow players to be able to use the winter fairway year round which may reduce the numbers of people impacting the hillside. Plant hillside, place temporary barriers, and reroute trail.
5	Disc contact with blue oaks	Create alternative target.	Medium	Target surrounded by trees that are impacted by discs.
6	Long bare area on thin soils, blue oaks on fairway sides impacted.	Create alternative target.	Medium	Shortened hole distance will also 'narrow the funnel" reducing the potential impacts to trees and make a smaller footprint to lessen erosion.
7	Trees and shrubs near target impacted.	Create alternative target.	Low	May provide a chance for plants to recover, and may lessen chances of errant discs contacting trail users near rim.
8	Trees and shrubs starting about 2/3 of the way down the fairway.	Create alternative target	Low	Provides chance for recovery on impacted trees.
9	Target is essentially surrounded by trees. Impacts on trees evident, but appear to be lower velocity (putting), the grouping also means that trees are somewhat more protected than individual trees.	Create alternative target.	Medium	The grouping of trees also allows for protection, but this may change if one of the trees declines or fails. Alternative target provides chance of recovery for trees.

Hole	Issue	Action	Priority	Rationale
10	A small grouping of trees surround the hole. Breakage on limbs and one sapling from discs (and probably visitors making a straighter shot)	Create alternative target	High	Even moving a short distance will mean that players will not try to "throw thru" the trees.
11	Challenging area for tree growth.	Create alternative target.	Medium*	Limit contact with oaks. Increases separation from Hole 7.
12	Hole is one of the longest ones on the course (over 350 feet). Because of short distance from tee to first set of trees means that they receive high velocity impacts	Create alternative target.	High*	Minimize confusion and chance to hit people on trail near Hole 4. Will minimize impacts to trees in mid-part of course, and allow for a shorter trail to Hole 13.
13	Fairway straight up hill with foot traffic going up the fall line causing erosion and multiple paths around trees. Broken branches and high number of tree contacts. Small trees at impacts are evident and will only increase over time.	Create alternative target, slightly north (along construction haul route consider haul route as trail to next hole).	Medium / High	Moving it to north may minimize split path and damage to multiple oaks.
14	Foot traffic into wildflower field (on left of fairway). The 2 trees sampled on this hole have a high number of broken branches.	Create alternative target. Plant shrub or grey pine to left of tee.	High	May narrow up fairway (limit advantage of throwing to left). The original design of this hole was shorter, but changed in field because current location is where original tee and existing impacts were (and was more level, requiring less material for pad). May line up with trail more logically to 15.
15	Damage to oaks along fairway.	Create alternative target. Cage smaller trees and saplings.	Medium	Hole placement may allow for different approach to hole changing impacts to trees.
16	Damage to lower branches of trees and small saplings.	Cage smaller trees and saplings.	Medium	Few options to move target.
17	Lack of primary path once players top the stairs. Damage branches to large oak on fairway. Interference to players at 18 (no look throw makes it harder to warn them).	Install signs. Create alternative target.	Medium	Placement may narrow bare area and encourage softer throws near larger oak.
18	Damage to oaks (predominately branches).	Create alternative target.	High	Placement protects from hard throws.

B. Alterations to the Next Monitoring Plan or Report

The following should be added to the next management plan (many of these are repeated from last year's monitoring report):

1. Cease the collection of transact sampling. The comparison of reference and priority trees has been useful, and in comparison, the transect data has been of marginal utility. With two years of data (no significant changes), a good baseline has been established for any future comparison if desired. Instead, those trees should be added to the Reference Tree – Priority Tree data collection.
2. As per NSR (2014) develop a consistent monitoring protocol to map the "wildflower fields", and include floristic composition, patch size, patch density, and minimum mapping unit. If possible, compare areas between data collected in 2005, 2012, and future data. One solutions is to consider the knotweed polygons as surrogates for the "wildflower fields" and not collect the additional data.
3. Recommend from field inspection if reference tree R12-003 should be converted to a priority tree. The data suggest that this tree is subject to disc impacts based on the quad impacts (3), broken branches (10), and damaged bark patches (5).
4. Document photo point locations.
5. Reduce the number of photopoints reproduced in the reports to about 20. Currently, there are over 61 photo points and the comparison between years makes this number unwieldy.
6. Add the protocol for the addition of Reference trees. Reference trees were added to provide a comparison between trees on disc golf fairways and those minimally impacted by disc golf play.
7. In addition to the "damaged cambium" or "number of damaged quads" count the number of impacts. All data since 2011 have collected these data.
8. Emerging as a potential issue in our area, the presence of mistletoe was noted under comments for this year and as an indicator variable.

V. SUMMARY

This represents the third monitoring report for the Peregrine Point Disc Golf Course.
As part of the adaptive management approach, we will update the Monitoring Report based on recommendations in this report and complete course improvements. While many things are working well on the course, the damage to blue oaks have emerged as a leading concern and staff recommends providing alternative hole/target placement to minimize impacts.

VI. REFERENCES

Chico Environmental Science and Planning. 2009. Interim Adaptive Wet Weather Management Plan. Prepared for the General Services Department, City of Chico Parks and Open Space Division. December 2009. Chico, CA.

[Chico] City of Chico. 2011. Monitoring Plan for the Peregrine Point Disc Golf Course. Chico, California. Revised Draft. May 2011. General Services Department, Parks Division. Chico, California.

[Chico] City of Chico. 2013a. 2013 Year End Monitoring Report for the Peregrine Point Disc Golf Course. Chico, California. September 25, 2013. General Services Department, Parks Division. Chico, California.

[Chico] City of Chico. 2013b. Adaptive Wet Weather Trail Management Plan (Revised 2013). Bidwell Park, Chico, California. October 15, 2013. Public Works Department, Parks Division. Chico, California.

EDAW. 2008. Final Bidwell Park Master Management Plan Update (BPMMP). Prepared for the City of Chico. Sacramento, CA.

Foothill Associates. 2012. Upper Bidwell Park Peregrine Point Disc Golf Course Baseline (Year 1) Oak Tree Monitoring and Assessment Report. March 15, 2012. Chico, CA.

Stuart, K. 2002. Survey for Special-status Botanical Species for the City of Chico's Bidwell Park Trails Project. Prepared for the City of Chico, Parks Department. Chico, CA

McCreary, DD. 2011. Living Among the Oaks. A Management Guide for Woodland Owners and Managers. ANR Publication 21538. http://anrcatalog.ucdavis.edu/ University of California Agriculture and Natural Resources. UC Cooperative Extension.

[NSR]. North State Resources. 2011. Peregrine Point Disc Golf Course Botanical Monitoring. NSR No. 51325. Chico, CA.

[NSR]. North State Resources. 2012a. Peregrine Point Disc Golf Course Botanical Monitoring. NSR No. 51325. Christine Hantelman and Paul Kirk. November, 12, 2012. Chico, CA.

[NSR]. North State Resources. 2012b. 2012 Peregrine Point Disc Golf Course Oak Tree Assessment and Monitoring Report. NSR No. 51325. Scott Gregory. December 11, 2012. Chico, CA.

[NSR]. North State Resources. 2013. 2013 Peregrine Point Disc Golf Course Oak Tree Assessment and Monitoring Report (NSR Project No. 51325). Scott Gregory. December 24, 2013. Chico, California.

[NSR]. North State Resources. 2014. 2013 Botanical Survey Results. Peregrine Point Disc Golf Course Botanical Monitoring. NSR No. 51325. Christine Hantelman and Paul Kirk. April 10, 2014. Chico, CA.

Herrick, JE and TL Jones. 2002. A Dynamic Cone Penetrometer For Measuring Soil Penetration Resistance. Soil Sci. Soc. Am. J. 66:1320–1324 (2002).

S:\Park\Projects\Active\Disc Golf\Mitigation&Monitoring\DG_Monitoring_Plan(draft)_10_1028.doc
Last printed 6/24/2014 3:53 PM

Appendix A – Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area.

Only the details of active categories and measures shown, completed or not applicable measures removed. Removed measures are indicated with grey text.

See Monitoring Plan (Chico, 2011) for entire list.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
AIR QUALITY			During construction.		Measures (11) applied during construction only. No further action required.
BIOLOGY	See Below	See Below	See Below	See Below	See Below
Mitigation Measure BIO-1b: Implement Measures to Protect Butte County Checkerbloom in the Disc Golf/Trailhead Concept Plan Area The following measures shall be implemented to mitigate potential direct and indirect effects on populations of Butte County checkerbloom from implementation of the Disc Golf/Trailhead Area Concept Plan:	OPERATOR / CITY	OPERATOR/ CITY	Before ground-disturbing activities and during ongoing operation	See Below	See Below
a. As provided in Appendix H of the BPMMP, the Disc Golf/Trailhead Area Concept Plan shall be implemented to avoid direct and indirect impacts on known locations of Butte County checkerbloom on the site. All disc golf structures (e.g., tees, targets, fairways) and trails shall be placed a minimum of 50 feet from locations that currently support Butte County checkerbloom wherever possible. Where this cannot be accomplished due to physical site constraints, the buffer may be reduced, but shall remain at a minimum of 25 feet.	OPERATOR	N/A	During construction activities, and ongoing monitoring.	Implement during construction; monitor monthly	In progress. The course alignment addresses many of these issues. However, two course features (existing trails), falls within 25 feet of checkerbloom plants, and it may not be possible to move the trail (users may ignore reroute efforts in those areas). For example, an existing trail near Hole 14, comes within 25 feet of a checkerbloom plant (the plant was discovered after the 2005 survey. Snake rail fencing has been placed in this area to clearly define the trail, and keep users away from the sensitive area.
b. Before construction… Butte County checkerbloom, exclusionary fencing ….	OPERATOR	OPERATOR	During construction.	.	Completed. No further action required.
c. The Disc Golf/Trailhead Area Concept Plan shall restrict foot traffic to clearly defined trails and disc golf features. Trails shall be constructed as narrow as possible to avoid degradation of suitable habitat for Butte County checkerbloom (and other special status plant species). Where existing disc golf structures and trails in the vicinity of existing locations of Butte County checkerbloom will be decommissioned, barriers (such as boulders) shall be placed to discourage use of these trails and structures.	OPERATOR with qualified botanist	OPERATOR	During construction activities and on-going.	Implement during construction; monitor monthly during construction	Completed. Requires on-going monitoring. Construction phase completed. Maintenance phase in progress. Staff anticipates on-going work with Operator to define trails (with snake rail fencing, rock lining of paths, and potentially plantings) to protect resources and narrow trails, and to decommission trails. The trails for the Trailhead Concept plan have not been delineated.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
d. Permanent signage at the trailhead/rest area shall be installed to inform Park users of the presence and sensitivity of Butte County checkerbloom (and other sensitive resources) on the site.	OPERATOR	OPERATOR	On-going.	Install after construction; monitor signage annually.	Completed. Requires on-going monitoring and upkeep of signs.
e. As provided in Appendix H of the BPMMP, alternate pin locations for Holes 3 and 4 of the long course shall be used from March 1 through July 1 to provide further assurance that potential disturbance of nearby checkerbloom plants during the active growth and blooming period of the plants is minimized.	OPERATOR	OPERATOR/ CITY	During and after (seasonally) construction.	Implement and monitor annually	Construction phase completed. Requires on-going monitoring of seasonal pad changes and use. Alternative pin installation complete for Holes 3 and 4. Only the winter fairway is installed and used as the all season fairway for Hole 13.
f. Per Plant Objective O. P-8 of the BPMMP, an adaptive management program shall be implemented that relies on periodic data collection on the distribution of Butte County checkerbloom at the Disc Golf/ Trailhead site. The goal of this adaptive management program shall be to document and monitor changes in the existing population of Butte County checkerbloom over time. The adaptive management plan is intended to address the fact that, notwithstanding the buffers and signage, the CITY cannot guarantee that the use of the park will not disturb Butte County checkerbloom.	OPERATOR	OPERATOR	After construction.	Monitor annually	Completed. Requires on-going monitoring. Plan completed. Implementation in progress. The Monitoring Plan lays out the sampling protocol, which includes the GPS locations of wildflower fields and checkerbloom. Samples collected in 2010 and 2011.
g. If data collection indicates a decline in existing populations after implementation of the Disc Golf/Trailhead Area Concept Plan and Plant Objective O. P-8 of the BPMMP, relocation of trails or disc golf structures in the vicinity of these populations, or other management strategies that would benefit the plants based on the data collected, shall be implemented. This strategy would implement Plant Objective O. P-7 and Plant Implementation Strategies and Guidelines I. P-3 and I. P-4 of the BPMMP. The overall goal of the adaptive management strategy shall be the long-term maintenance of the same number and approximate extent of	OPERATOR / CITY	OPERATOR to reimburse CITY for surveys of checkerbloom, wildflower fields (Years 1, 3 and 5 and every other year thereafter – cost est. to be $2,000 per survey)	After construction.	Monitor annually.	In progress. Data collection in 2011 will allow for future comparisons and we will be able to start to examine trends with the 2012 survey data.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
occurrences of Butte County checkerbloom as documented during the 2005 surveys.					
Mitigation Measure BIO-1d: Implement Measures to Protect Bidwell's Knotweed at the Disc Golf/Trailhead Area The following measures shall be implemented to mitigate for potential direct and indirect effect to Bidwell's knotweed at the Disc Golf/Trailhead Concept Plan area:	OPERATOR / CITY	OPERATOR/ CITY	See Below	See Below	See Below
a. The Disc Golf/Trailhead Area Concept Plan shall be implemented to minimize direct and indirect impacts on Bidwell's knotweed habitat on the site. Because Bidwell's knotweed is an annual plant species, population sizes may fluctuate greatly from year to year. Therefore, simply avoiding plants that are present in a given year would not ensure that great numbers of individuals would not be affected in subsequent years**.** Therefore, a habitat approach shall be taken to minimize impacts on this species. This approach would entail minimizing impacts to wildflower fields, the native plant community that supports Bidwell's knotweed.	OPERATOR / CITY	OPERATOR/ CITY	During construction of Disc Golf/Trailhead Area Plans and during ongoing operation	Implement prior to and during construction; monitor weekly during construction	In progress. The course alignment addresses many of the negative impacts from foot traffic. Data collected in 2011.
b. Consistent with the Disc Golf/Trailhead Area Concept Plan, trails shall generally be placed outside of wildflower fields. The Disc Golf/Trailhead Area Concept Plan shall be implemented to restrict foot traffic to clearly defined trails and disc golf structures. The number of trails dissecting wildflower fields shall be minimized to the fewest number necessary to facilitate reasonable access to the disc golf course and scenic viewpoints, and trails shall be as narrow as possible and have clearly marked edges to reduce widening and discourage users from wandering off the path. Existing trails through wildflower fields that will not be retained as part of the Disc Golf/Trailhead Area Concept Plan shall be decommissioned, and barriers (such as boulders) shall be placed just outside any points	OPERATOR / CITY	OPERATOR/ CITY	During construction of course and future trailhead. Ongoing.	Implement prior to and during construction; monitor monthly during construction	In progress. Many pathways were defined in 2011. With use we anticipate some modification and adjustment. Staff will be reviewing the trails and offer remedies with ORAI. With the course installation, a number of features have been placed to guide users to trails. The snake rail fencing appears to aid with narrowing and defining trails as users adapt to the new course. Staff will explore the need for it over time.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
where trails enter the wildflower field community to discourage use of these trails.					
c. Exclusionary fencing... construction … wildflower field … Bidwell's knotweed….			During construction.		Completed. No further action required.
d. Permanent signage at the trailhead/rest area shall be installed to inform Park users of the presence and sensitivity of Bidwell's knotweed and wildflower field habitat and to deter users from disturbing the species.	OPERATOR	OPERATOR	After construction.	Implement following construction; monitor signage annually	Sign completed, on-going monitoring and maintenance of sign.
e. Per Plant Objective O. P-8 of the BPMMP, an adaptive management program shall be implemented that relies on periodic data collection on the distribution of Bidwell's knotweed at the Disc Golf/ Trailhead site. The goal of this adaptive management program shall be to document and monitor changes in the existing population of Bidwell's knotweed over time.	CITY	CITY	After construction and ongoing.	Monitor annually	In progress. Adaptive management program described as part of monitoring plan and will be completed as part of future data collection.
f. If data collection indicates a decline in the number or extent (i.e. square feet) of existing populations after implementation of the Disc Golf/Trailhead Area Concept Plan, relocation of trails or disc golf structures in the vicinity of these populations, or other management strategies that would benefit the plants based on the data collected, shall be implemented. Seasonal and annual variation of the plants in response to environmental conditions such as rainfall shall be taken into consideration when determining if a decline is occurring. This strategy would implement Plant Objective O. P-7 and Plant Implementation Strategies and Guidelines I. P-3 and I. P-4 of the BPMMP.	OPERATOR	OPERATOR to reimburse CITY for surveys of Bidwell's knotweed, wildflower fields (Years 1, 3 and 5 and every other year thereafter – cost est. to be $2,000 per survey)	After construction and ongoing.	Monitor annually; develop program as needed	In progress.
Mitigation Measure BIO-2c: Implement Measures to Protect and Compensate for Loss of Vernal Pool Invertebrate and Western Spadefoot Habitat				-	None Exist. Measures (5) either completed or not applicable. No further action required.
Mitigation Measure BIO-2d(1): Protect Tree-Nesting Raptors			… construction …	-	Measures (3) related to construction. No further action required.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
Mitigation Measure BIO-2d(2): Protect Peregrine Falcon			…construction….	-	Measures (2) related to construction. No further action required.
Mitigation Measure BIO-2f: Implement Measures to Protect Other Special-status Nesting Birds			…construction ….	-	Measures (2) related to construction and completed on not applicable. No further action required.
Mitigation Measure BIO-3c: Implement Measures to Protect Oak Woodland The following measures shall be implemented to mitigate potential impacts on oak woodlands resulting from implementation of the Disc Golf/Trailhead Area Concept Plan:	OPERATOR	OPERATOR	During construction activities and during management.	See below	See Below
a. Where possible, trails, improvements, and facilities shall be constructed outside of oak woodlands. The number of trails dissecting oak woodlands shall be minimized to the fewest number necessary to accomplish the goals of the site-specific Park Improvement Projects. The width of trails through oak woodlands shall be minimized and trails shall have clearly marked edges that discourage trail widening and deter users from straying off the designated trail.	OPERATOR – biologist	OPERATOR	TBD	Implement during construction	In progress. Staff and Operator will be reviewing trail routes and trails that will be decommissioned.
b. Trails through oak woodlands that are decommissioned as part of a site-specific Park Improvement Project shall be reclaimed using barriers (such as boulders) to discourage continued use of these trails.	OPERATOR / CITY	OPERATOR/ CITY	TBD	Implement during and following construction; monitor annually	In progress. Under review. Some barriers (i.e. snake rail fencing, rocks, and eventually plantings) will define a reduced footprint of tee pads and trails.
c. Grading, trenching, equipment storage, and other soil-disturbing or compacting activities shall not occur within the drip lines of oak trees. New structures and impervious-surface materials shall not be placed in the drip lines of oaks, except where deemed necessary to reduce the footprint size of tees as part of the proposed Disc Golf/Trailhead Concept Plan and to reduce soil compaction.	OPERATOR	OPERATOR	TBD	Implement during and following construction; monitor monthly during construction	Completed. No further action required. No grading, trenching, equipment storage occurred on site. The construction access route was planned to avoid wildflower field and blue oak areas to the extent possible. Operator's consultant suggested a priority be established to avoid drip lines and direct traffic over areas of tall grass (deeper soils), and minimize the extent of the route. Concrete tee pads have been installed to reduce the footprint size of tees.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
d. To ensure that the drip lines of oaks are not disturbed during construction, protective fencing shall be installed, under the guidance of a qualified botanist, certified arborist, or Registered Professional Forester, at least 1 foot beyond the outer edge of the drip lines of all oaks that grow within the construction zones of the site-specific Park Improvement Projects, and no project activities shall be allowed within these exclusion zones, unless specifically required as part of project construction.	OPERATOR / CITY	OPERATOR/ CITY	TBD	Implement prior to and during construction; monitor monthly during construction	Completed. No further action required. Operator's consultant provided guidance for tree protection.
e. The oak woodland management guidelines contained in Section 3 of the NRMP (Appendix C of the BPMMP) shall be implemented. These guidelines include recommendations for sustaining oak woodlands, initiating a burning program, and maintaining the oak landscape.	OPERATOR / CITY	OPERATOR/ CITY	TBD	During and following construction	In progress. The NRMP will be updated.
f. In addition to the measures outlined above, the following additional measures shall be implemented in connection with development and ongoing maintenance of the proposed Disc Golf/Trailhead Concept Plan to protect oaks and to mitigate for any unavoidable loss resulting from mortality over time. These measures are based on site observations, oak woodland management guidelines provided by DFG, and measure recommended in the tree assessment (Appendix E4):	OPERATOR / CITY	OPERATOR/ CITY	TBD	Implement during and following construction	In progress.
g. Any modification to the proposed design and layout of the site shall be subject to the same impact avoidance and minimization criteria as the initial design;	OPERATOR / CITY	OPERATOR-CITY	TBD	Implement during and following construction	In progress. Any modification to the course design and layout has been made with the intent of the mitigation measures. A couple of modifications are worth pointing out. Hole 8 was shortened to avoid a wildflower field and shortened the overall footprint of the project.. The numbers for Holes 15 and 16 were swapped to improve the route and minimize trails. Hole 14 was placed in its current location to minimize damage to a new area and minimize the importation of additional material to make the tee pad level. We anticipate

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
					modification to the course as part of the adaptive management program for the project.
h. Information describing the value of native oak trees and the importance of the preservation and protection of oak woodland for wildlife habitat and the aesthetic values of Bidwell Park shall be provided at the informational kiosk at the Disc Golf/Trailhead area site. The information shall discuss the importance of avoiding direct impacts resulting from bark and limb damage as well as indirect effects such as soil compaction/root damage and shall encourage site users to act responsibly and prevent adverse effects.	OPERATOR - CITY	OPERATOR to reimburse CITY for surveys of oaks (Years 1, 3 and 5 and every other year thereafter – cost est. to be $1,000 per survey	TBD	Implement following construction; inspect signage annually	Completed. Follow-up monitoring required so that sign remains. City reviewed and approved ORAI sign (2011).
i. In cases where disc golf pins are located within groves of oak trees or oak trees are within fairways, measures to protect the tree trunks such as the installation of shielding pole structures shall be implemented. Installation shall be implemented without damage to the root zone, and in a manner that preserves the visual character of the site.	OPERATOR - CITY	OPERATOR - CITY	TBD	Implement during and following construction; monitor annually	Completed. Monitoring and placement on-going. Moveable wood pole structures in a concrete base were placed on site and were adjusted before the course opens.
j. In cases where tees or trails are located within drip lines of oaks or in the immediate vicinity of drip lines, a 6 inch layer of woodchip mulch shall be applied to a 20' radius around the tees and on the trails to minimize soil compaction; this layer shall be maintained on a ongoing basis, as needed, to ensure continued protection of the root zones.	CITY	CITY	TBD	Implement during and following construction; monitor annually	Completed for construction (modified). On-going monitoring and action required. Modification: The purpose of the mulch is to minimize compaction under oak trees. For some locations (for example Hole 13) current play does not appear to be impacting areas 20 feet away. The installation of the tee pad, fencing, and other features will better define areas and likely reduce the area subject to compaction. Staff has concern that the addition of mulch in areas not unduly impacted by foot traffic will result in undesirable unintended impacts (mulch suppressing plant growth, requiring additional trips to install, and the requirement of 6" of mulch would either bury the roughly 3.5" tall tee pad, require additional concrete). Staff has approved the proposal to start with a smaller footprint and thinner layer for mulch. This approach will be examined

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
					once play begins and may require more frequent addition of mulch and future modification.
k. Periodic monitoring of the oaks at the site shall be conducted to determine if any unavoidable impacts are occurring as a result of site use, in spite of the impact minimization measures.	OPERATOR	OPERATOR	TBD	Monitor at least twice yearly following construction	To be determined.
l. Any unavoidable impacts to oaks resulting from construction, or tree mortality resulting from ongoing use of the site shall be mitigated by replanting oak woodland habitat at the Disc Golf/Trailhead site in areas located outside of the footprint of facilities and trails in areas not currently occupied by other sensitive resources and suitable to support blue oak woodland.	OPERATOR / CITY	OPERATOR/ CITY	TBD	Implement as needed after construction	To be determined.
m. Oak planting should be from seeds (acorns) or seedlings that are obtained from the local genetic stock and should be of the same species as those targeted for replacement. Replacement ratios shall be at least 5:1 for trees lost/replaced that are greater than 5 inches diameter at breast height.	OPERATOR / CITY	To be accomplished above B10-3c-f	TBD	Implement and monitor as needed after construction	To be determined. On site acorns will be collected and used for any future plantings.
n. Oak plantings shall be protected from browsing, planted on the north and east side of existing trees, and irrigated during the first few years as outlined in the oak assessment (Appendix E4) to enhance their chance of survival.	OPERATOR / CITY Relating to disc golf facilities only.	OPERATOR/ CITY	TBD	Implement and monitor as needed after construction	To be determined.
o. Replacement plantings shall be monitored for their success for a period of five years or until the desired performance criterion of 5:1 is achieved, whichever is longer. If planting does not succeed, remedial actions such as replanting shall be implemented.	OPERATOR / CITY	OPERATOR/ CITY	TBD	Monitor yearly after planting for five years or until success criteria are achieved	To be determined.
p. If requested, community/user group stewardship of the plantings shall be allowed to contribute to restoration/revegetation efforts under guidance and supervision by CITY staff.	OPERATOR / CITY	OPERATOR/ CITY	TBD	Implement after construction	To be determined.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
Mitigation Measure BIO-3d: Implement Measures to Protect Wildflower Fields The following measures shall be implemented to minimize potential disturbances to wildflower field communities resulting from implementation of the Disc Golf/Trailhead Area Concept Plan:	OPERATOR / CITY	OPERATOR/ CITY	Before and during construction …. that occur within the immediate vicinity of wildflower fields	See below	See Below
a. Mitigation Measure BIO-1d shall be implemented to minimize adverse effects on wildflower fields resulting from implementation of the Disc Golf/Trailhead Area Concept Plan.	OPERATOR / CITY	OPERATOR/ CITY	TBD	Implement during construction; monitor as indicated above	In progress.
b. Whenever possible, trail segments, site improvements, facilities and other design features shall be located to minimize impacts to wildflower fields.	CITY	CITY	TBD	Implement prior to and during construction; inspect monthly during construction	Completed. On-going monitoring and action required.
c. Exclusionary fencing … wildflower field habitat...				….construction	Completed. No further action required.
d. The number of trails dissecting wildflower fields shall be minimized to the fewest number necessary to accomplish the goals of the site-specific Park Improvement Projects.	OPERATOR	OPERATOR	TBD	Implement prior to and during construction	In progress.
e. Trails through wildflower fields shall be as narrow as possible and shall have clearly marked edges that discourage trail widening and deter users from straying off the designated trail.	OPERATOR / CITY	OPERATOR / CITY	TBD	Implement prior to and during construction	In progress.
f. Existing trails through wildflower fields that will not be retained as part of the site-specific Park Improvement Projects shall be reclaimed using barriers (such as boulders) to discourage use of these trails. If these reclaimed trails fail to revegetate on their own over time, re-seeding may be considered.	OPERATOR / CITY	OPERATOR / CITY	TBD	Prior to, during and after construction; monitor annually	In progress.
g. Permanent signage shall be installed at kiosks located at the Disc Golf/Trailhead Area Concept Plan site to inform Park users of the presence and sensitivity of the wildflower field	OPERATOR	OPERATOR	TBD	Install after construction; monitor annually	Completed. On-going monitoring of signs required.

Appendix A - Revised (As Of 4/1/14) Active Mitigation And Monitoring Measures For The Bidwell Park Peregrine Point Disc Golf/Trailhead Area. Completed or Not Required Measures Removed (See Monitoring Plan for entire list).

Mitigation Measure	Implementation Responsibility	Funding Responsibility	Implementation Trigger or Date	Frequency	Implementation Comments
community and discourage visitors from off-trail use and trampling of vegetation.					
Mitigation Measure BIO-4: Implement Measures to Protect Jurisdictional Wetlands			NA	… construction	Measures (6) not applicable. None found (Gallaway, 2009). No further action required.
CULTURAL RESOURCES			…construction…	Completed	Measures (9) related to planning or construction. No further action required.
HYDROLOGY			….construction…		Measure (1) related to construction. No permit required. No further action required
NOISE			…construction		Measures (3) completed during construction. No further action required.
TRAFFIC					
Mitigation Measure Traffic-4: Coordinate with Caltrans a. To address the potential increase in traffic hazards resulting from implementation of the Disc Golf/Trailhead Area Concept Plan, the CITY shall coordinate with Caltrans to obtain an encroachment permit for construction of the site access and parking lot for the Disc Golf/Trailhead area. As part of the consultation with Caltrans, the CITY shall address the potential need for additional signage and/or a left turning lane to address traffic safety along SR 32. The CITY shall implement any measures deemed necessary by Caltrans as a condition of the encroachment permit or as a result of the consultation on safety.	CITY	CITY	Prior to construction of the Disc Golf/Trailhead Area Concept Plan	N/A	To be determined. This mitigation will be completed as part of trailhead access construction. Staff did meet with Caltrans and they have completed improvements to the entry.

Notes: N/A – Not Applicable, TBD – To Be Determined.

Appendix B – 2012 ORAI Annual Report

January 1st 2014

City of Chico
965 Fir St.
Chico Ca, 95926

Subject: 2013 Annual Report

To Whom It May Concern:
Per the operating agreement currently in place, the following is the report for the Peregrine Point Disc golf course for the year 2013.

Background: A section of the operating agreement signed by the Chico Outsiders requires and annual report on Peregrine Point be made to the City of Chico. This report covers all happenings and business to do with the course within the time frame of January 1st 2013 to December 31st 2013.

Usage: Although the Chico Outsiders are not required to maintain records of regular public usage of the Peregrine Point Disc golf course or their demographics, we have been in contact with the Bidwell park rangers and it is agreed that usage seems to be up by approximately 25% from the previous year.

The Chico Outsiders had 9 exclusive use days in 2013 and were able to sell fundraising items one Saturday per month. We held organized tournaments on all but one of the exclusive use days. These Tournaments brought in between 25 and 75 people. One of these tournaments (The Flight of the Falcon) was the first PDGA (Professional Disc Golf Association) official tournament to ever be held at the Peregrine Point disc golf course, Peregrine Point was recognized as a very clean and natural setting and a great place to play by many PDGA officials. During these Tournaments we took the opportunity to educate people on the preservation of the course, and how they can leave a minimal impact on the course while enjoying their time on the course to the fullest.

The Peregrine Point Disc Golf course was also just recognized in 2013 in DGCR (Disc Golf Course Review) as one of the top ten best courses in California, reaching #7 on the list of 273 possible courses.

Course Conditions: Surprisingly for the very small amount of rainfall in 2013 the course was able to sustain green grass and wild flowers all the way into late May. As per the studies for 2013 you can see that all trees and plant life are sustaining well with the increased human interaction. Unfortunately a few medium to large size trees on the course have fallen down but per the study this accrued from natural causes (i.e. wind, beetle kill).

Course Maintenance: The Course maintenance this year was handled very well thanks the Chico Outsiders new Peregrine Point Maintenance Committee. This is a small Committee formed under the Chico Outsiders organization; the committee takes individuals within the public interested in keeping the course clean and natural, and forms work parties to accomplish small course improvements. We had over 300 hours of donated time this year by the committee and its members, executing small tasks such as: unwanted trail abatement, litter removal (surprisingly minimal), tee pad maintenance, mulch spreading, fixing rail fencing around OB's and cleaning any graffiti from benches and baskets. The maintenance committee would also use this time to educate the public on how to leave a minimal impact while enjoying their day at the course.

Course Improvements: In 2013 we put out a few more arrow painted rocks to help new comers to stay on the main trails in the fairways and between targets and tee pads, this seems to be working well as no new trails are forming. Also a lot of "spur" trails off of the regular fair way trails seem to be disappearing and recovering well from the Maintenance Committee's trail abatement, which can include changing direction of rail fences, painted arrow rocks, or stacking natural debris in spur trails. Over all we believe with committee's new "educate while you play program" is helping to improve the condition of the course with the increasing number of players it is seeing.

Proposed Activities: In 2014 we will have our regular Bag Tag opener, 3 more PDGA official events, our small weekly club events and a few other fun tournaments including a free kid's tournament. All these events will be open to the general public on our Exclusive Use Days to help assist in fundraising.

Finances: In 2013 the Chico Outsiders paid out $8146.15 this includes $5844.15 toward environment studies, $1462.00 for insurance and $840 course maintenance and improvements. This was all paid for by the selling of fundraising items, fundraising events and donations for the public.

Advertising: The Chico Outsiders are required to regularly advertise the Peregrine Point Disc Golf course to the public; we do this in many ways. One is through Social Media; we currently have over 650 members on our Peregrine Point Facebook group, we also have a Twitter, Instagram and Daily updated website. Another way is through course signage, where we post all weekly, monthly and Tournament events. We also have fliers and posters in local businesses around town like Sports LTD and Play it Again Sports; these are also venders that are kind enough to sell our fundraising items in their stores for no profit.

Another new addition to the Chico Outsiders Organization is its new Public Outreach Committee. This committee was formed for the sole intention on educating the public on how to protect, preserve and play disc golf. The committee does this by going to events that are not necessarily focused on disc golf and educating the public on our cause and how they can help to preserve nature even in a non-disc golf setting. We play basket putting games with kids and adults and give out prizes to children when they prove to understand such things as preserving

natural beauty of our parks and litter removal. The committee in 2013 visited many events such as; The Celebrate the Jewel, The Chico Bike Music Festival, Thursday night Market, The Buckhorn RYTO and many more. In 2014 the committee is planning to visit even more events then the previous year.

Conclusion: The Chico Outsiders Non-profit Organization is thankful for the help from both the city and the pubic in keeping its beautiful course open to everybody. Peregrine Point Disc golf course has grown a lot in popularity and is seeing much more use by the public, but the studies have proven that through educating of the public and hard work we can all work together to keep the course as natural and beautiful as the day it was built. We believe with the addition of our new committees; the Maintenance Committee and the Public Outreach committee, we can help people to see and understand the gift that our amazing park is and how to preserve every part of it.

Thank you for your time
Sincerely,

Adam Filippone – President
Outsider Recreation Advocacy, Inc.
A California 501(c)3

Appendix C – Peregrine Point Photos

CITY OF CHICO MEMORANDUM

TO: FILE DATE: 7/8/11

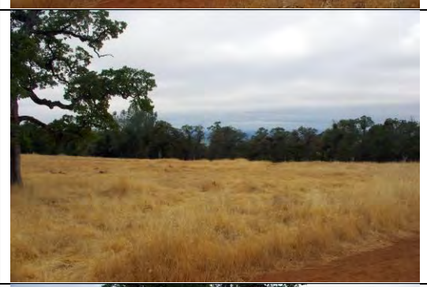
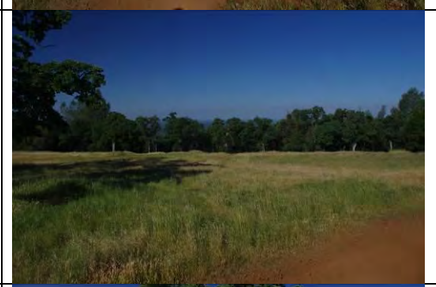
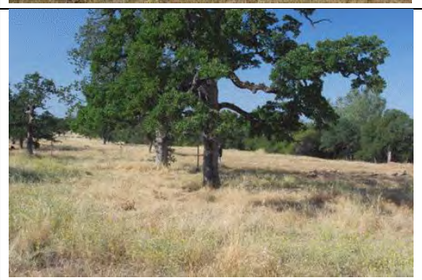
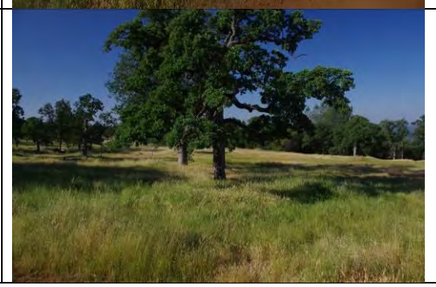
FROM: DAN EFSEAFF FILE: PP-DG

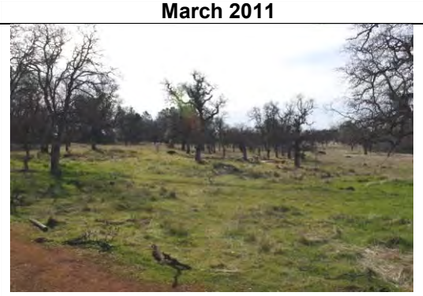
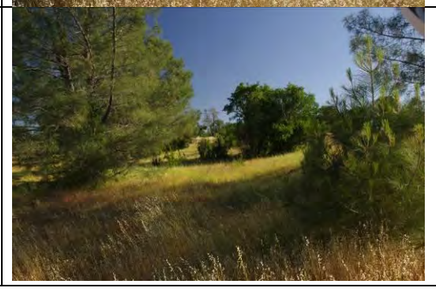
SUBJECT: PEREGRINE POINT DISC GOLF COURSE – SITE PHOTOPOINTS 2011, 2012 AND 2013.

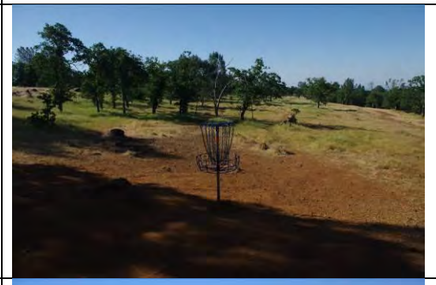
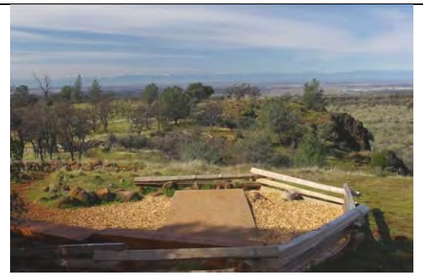
Instructions – Insert photo and add location caption, compress the pictures to reduce the overall file size, sort by column 1. Nomenclature: Hole # - Tee Pad (H*- P) and Hole # - Target (H*-T).

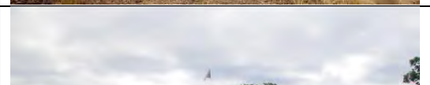
Hole (H) and Photo-Point Panorama (PP) Photographs

Location	March 2011	July 2011	July 2012	May 2013	October 2013
PP-1					
H1-P					
H1-T					

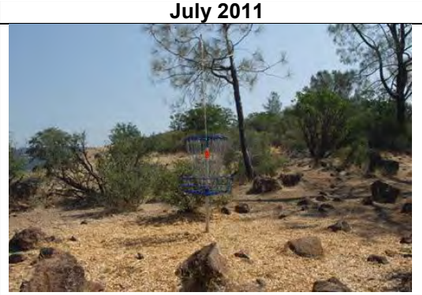
Location	March 2011	July 2011	July 2012	May 2013	October 2013
PP-2.1					
PP-2.2					
PP-2.3					
PP-2.4					
PP-2.5					

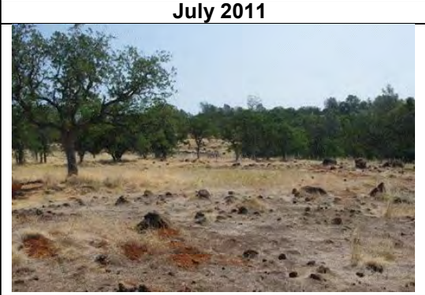
Location	March 2011	July 2011	July 2012	May 2013	October 2013
PP-2.6					
PP-2.7					
PP-2.8					
PP-2.9					
PP-2.10					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H2-P					
H2-T					
H3-P					
H3-T1					
H3-T2 (toward H4–P)					

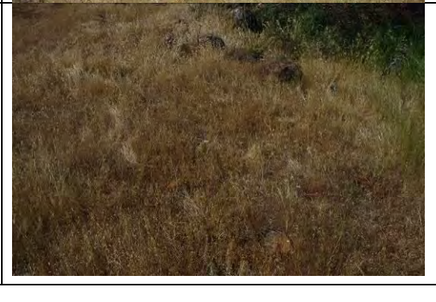
Location	March 2011	July 2011	July 2012	May 2013	October 2013
H3-T3 (toward H4-T)					
H3-T4 (toward H4-T alternate)					
H4-T1	 	 	 	 	 
H4-T2 (cliff)					
H4-T3 (toward H5-P)					
H5-P					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H5-T1					
H5-T2 (toward H6-P)					
H6-P					
H6-T1					
H6-T2 (toward H7-P)					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H7-P					
H8-P					
H8-T					
H9-P (same location as H8–T)					
H9-T1					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H9-T2 (of H10-T)					
H9-T3 (of H11-P)					
H10-P1					
H10-P2					
H11-P1 (H10-T)					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H11-P2					
H11-T1					
H12-P1					
H12-T1					
H12-T2 (toward H13-P)					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H13-P1					
H14-P					
PP3-1					
PP3-2					
PP3-3					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H14-T					
H15-P					
H15-T1					
H15-T2					
H15-T3					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H16-P					
H16-T					
H17-P1					
H17-P2					
H17-T					

Location	March 2011	July 2011	July 2012	May 2013	October 2013
H18-P					
H18-T					

Appendix D – [NSR]. North State Resources. 2012. Peregrine Point Disc Golf Course Botanical Monitoring. NSR No. 51325. Christine Hantelman and Paul Kirk. November 12, 2012. Chico, CA.

Technical Memorandum

Date: September 27, 2013

To: Mr. Dan Efseaff, Park and Natural Resource Manager, City of Chico

From: Ms. Christine Hantelman, Botanist and Mr. Paul Kirk, Project Manager

Project: NSR No. 51325 - Peregrine Point Disc Golf Course Botanical Monitoring

Subject: 2013 Botanical Survey Results

I. INTRODUCTION

On behalf of the City of Chico (City) and Outdoor Recreation Advocacy, Inc. (ORAI), North State Resources, Inc. (NSR) conducted a botanical survey on and around the site of the Peregrine Point Disc Golf Course, hereinafter referred to as the "study area." This letter summarizes the results of the findings regarding the botanical resources detected and mapped within the study area. Two figures are located at the end of the memorandum.

II. PROJECT LOCATION

The approximately 70-acre study area is located along State Highway 32 approximately 7 miles east of the city of Chico (Figure 1). The study area occurs in the eastern portion of Bidwell Park on the south rim of the ridge overlooking Big Chico Creek at an elevation range of 1,050 to 1,300 feet above mean sea level. Barbed-wire fence encloses the study area on the southern and western edges.

III. PHYSICAL AND BIOLOGICAL SETTING

The study area is sited upon volcanic mudflow breccia that is part of the Tuscan Formation. These hard mudflows form the rocky outcrops covered with thin soils that support the vegetated areas identified as "wildflower fields" in previous surveys of the study area (City of Chico and EDAW 2008). Blue oak occurs on the deeper soils formed on volcanic conglomerate (U.S. Department of Agriculture and Natural Resources Conservation Service 2006).

The site has been used by hikers and naturalists and, currently, as a disc golf course. Footpaths and trails, eroded soils, trampled plants, and damaged trees are some examples of disturbances at this site that reflect its historical and current use.

Vegetation on the site is a mix of blue oak (*Quercus douglasii*) savannah with sparse, scattered tree cover and blue oak/foothill woodland with foothill pine (*Pinus sabiniana*) and interior live oak (*Quercus wislizenii*), interspersed with annual grassland elements and exposed volcanic mudflow. Understory shrubs and vines occurring within the woodland are manzanita (*Arctostaphylos manzanita*), redberry (*Rhamnus ilicifolia*), buck brush (*Ceanothus cuneatus*), poison oak (*Toxicodendron diversilobum*), and honeysuckle (*Lonicera interrupta*). Grassland within the study area is dominated by non-native annual grasses including wild oats (*Avena*

barbata), Italian wildrye (*Festuca perennis*), soft chess (*Bromus hordeaceus*), annual fescues (*Festuca* spp.), false brome (*Brachypodium distachyon*), dogtail (*Cynosurus echinatus*) and medusahead (*Elymus caput-medusae*). Non-grass species flowering at the time of survey include twining brodiaea (*Dichelostemma volubile*), soap plant (*Chlorogalum pomeridianum*), purple clarkia (*Clarkia purpurea*), yellow mariposa lily (*Calochortus luteus*) and Butte County checkerbloom (*Sidalcea robusta*).

Thinner soils associated with the edges of the exposed volcanic mudflow support a few annual a grasses, mostly annual fescues and soft chess, as well as needle-leaved navarretia (*Navarretia intertexta*), Douglas' sandwort (*Minuartia douglasii*), dwarf stonecrop (*Parvisedum pumilum*), Hansen's spike-moss (*Selaginella hansenii*) and Bidwell's knotweed (*Polygonum bidwelliae*).

IV. SURVEY METHODOLOGY

NSR Botanist, Christine Hantelman, conducted a targeted survey on April 26 and 29, 2013 to relocate and map previously recorded occurrences of the Butte County endemics, Butte County Checkerbloom (hereinafter "checkerbloom") and Bidwell's knotweed (hereinafter "knotweed"). A map of checkerbloom occurrences from botanical surveys conducted in 2012 was used to relocate known checkerbloom plants. Survey effort was limited to the portion of the study area encompassing the Peregrine Point Disc Golf Course area and the northeastern end of the study area where checkerbloom has been documented in previous years. Wildflower fields within the main area of play that were known from previous surveys to contain knotweed were surveyed and knotweed occurrences mapped; other wildflower fields were scanned for presence of knotweed as time permitted. Incidental observations of noxious weeds were also recorded. Although associated species and general vegetation attributes were noted with regard to rare plant occurrences, a full floristic survey was not conducted. Taxonomic nomenclature for plant species is in accordance with *The Jepson manual: vascular plants of California, 2nd edition* (Baldwin et al. 2012).

Checkerbloom units and counting methodology followed the survey methodology detailed in the *2011 Botanical Monitoring Results Technical Memorandum* (North State Resources 2011). Specifically, the following checkerbloom units were used:

- Individuals - single meristems separated from other meristems by 50 cm (19.6 in);
- Small clumps - clumps with 1-5 separate meristems co-located in an area less than 50 cm x 50 cm; and
- Large clumps - clumps with 5 or more meristems close together that cover an area greater than 50 cm x 50 cm.

To facilitate analysis of between year changes in populations of checkerbloom within discrete areas, checkerbloom groups (CG) were created by drawing polygons around closely co-located checkerbloom data points in 2011. Those same groups were again used for the checkerbloom data points recorded in 2013. Total number of checkerbloom units within each polygon (checkerbloom group) was counted. Flowering stems (racemes) were also counted and recorded for all checkerbloom units mapped in 2013.

The location of checkerbloom units were mapped as point data using a Trimble™ Pathfinder Pro XH Global Positioning System capable of sub-meter accuracy (Trimble GPS). For each data point, the number of checkerbloom units, phenology, plant associates, and observed threats were recorded using the *California Native Species Field Survey Form* (CNDDB 2008).

Bidwell's knotweed is a small annual species that occurs on the exposed volcanic mudflow and thin soils of the wildflower fields in the study area. Because knotweed plants can occur close together and in great numbers (often 100 or more), the boundaries of areas containing knotweed (patches) were mapped as polygon data using the Trimble GPS. Estimated number of individuals, phenology, plant associates, and observed threats were also recorded for each patch.

V. RESULTS

Checkerbloom

A total of 160 checkerbloom units were mapped (67 data points) during the 2013 survey. Approximately one third of the units (31%) were vegetative, that is, they produced no flower stems (racemes). The remainder (69%) bore racemes in various stages of development. Phenologically, the population at the study area was in early flower with 14% of the racemes in full flower and 45% of the racemes still in bud. The remaining racemes (41 %) had been "nipped" below the buds (presumably by deer or other herbivores). These data are summarized in Table 1. Data points and checkerbloom groups (CGs) are shown in Figure 2.

Table 1. Summary of field data for Butte County Checkerbloom occurrences at Peregrine Point Disc Golf Course collected April 29, 2013.

Checkerbloom Occurrence Attribute	Count	% of total
# units reproductive	69	31%
# units vegetative	111	69%
Total # units	**160**	**100%**
# racemes in flower/fruit racemes	26	14%
# racemes in bud	85	45%
# racemes nipped	76	41%
Total # racemes	**187**	**100%**

All of the checkerbloom groups (CG) mapped in 2012 were relocated and mapped in 2013. Most of the checkerbloom units occurred within blue oak woodland paralleling the 14th, 15th, and 16th fairways or were associated with individual oak trees or the drip line of shrubs at the ecotone of woodland and grassland (CG-3, CG-4, and CG-5). Another cluster of points was located along the edge of woodland east of the 2nd fairway (CG-6). The out-of-bounds areas between the two baskets on the 3rd fairway and bounded by rail fence was another area where checkerbloom was relatively abundant. A previously unrecorded "large clump" unit was discovered approximately 125 feet north of the CG-3, east of the 10th tee. This occurrence was heavily trampled and vegetative only. Additional checkerbloom units were mapped in the northeastern portion of the study area, outside the general area of disc golf play (CG-7 and CG-8), although some units in CG-8 mapped during previous efforts were not relocated in 2013.

In general, checkerbloom plants appeared to be in good condition. Plant units appeared to be smaller with fewer leaves and shorter flower stems during this dry year compared with wetter years (pers. obs). Flowering stems (racemes) were healthy, with no buds aborting as has been observed at other checkerbloom locations in dry years (Hantelman 2004). Evidence of herbivory on checkerbloom racemes was recorded on 41% of the racemes. The top portion of the flower stems had been "nipped," leaving no reproductive structures on the stem.

More total checkerbloom units were recorded in 2013 compared with previous years, although the percentage of units that produced reproductive structures was lower. This apparent increase in overall number of units may be an artifact of the dry winter and the clonal nature of the species. Drier years produce smaller plants with fewer, more widely spaced meristems. These would have been counted as individuals, but because the plant produces underground stems, the "individuals" might have actually been connected. In a wetter year, the same groups could be bigger and the distance between meristems smaller, thus making the plant appear as one large clump. The decrease in reproductive effort is likely due to the low rainfall received during this dry year and the high number of racemes produced in 2012. Many perennials have fluctuations in reproductive effort due to high expenditures in a previous year or resource limitations (e.g. water).

The perimeter fence immediately south of checkerbloom group 5 (CG-5) has been cut and pulled aside and a new mountain bike trail established through that checkerbloom group and the disc golf course. Some checkerbloom plants outside of the study area have been trampled. The approximate location of this bicycle-related disturbance has been noted on Figure 2 with the "X" along the study area boundary.

Knotweed

Most of the Bidwell's knotweed patches that were mapped in 2012 within the main disc golf area were relocated and mapped in 2013 (Figure 2). Two small occurrences (noted as POBI-11 and POBI-18 in 2012) were not relocated, despite extensive searching. The large wildflower field along the rim of the canyon between the ridge edge and north of 5th and 6th fairways was again scanned for knotweed; no plants were observed in 2013.

Although surveys took place nearly two weeks earlier in 2013 than the previous year due to a dry spring, the mapping effort was well-timed: over 90% of the knotweed plants were in flower, the time when the species is most readily detected. Knotweed plants were small and sparsely distributed. In all, 16 total knotweed patches were mapped with population sizes ranging from a few individuals to 1000s. Three of these patches include groups of 2 or 3 small polygons in close proximity to each other: POBI-6, POBI-7, and POBI-10. All knotweed patches occurred on thin soils associated with the edges and surface of exposed volcanic mudflow. Common plant associates observed within knotweed patches were Hansen's spike moss (*Selaginella hansenii*) and dwarf stonecrop (*Parvisedum pumilum*). Knotweed occurrences were also strongly associated with undisturbed algal crusts. A few knotweed plants were counted along the edges of trails or footpaths within or beside some wildflower fields, however, few if any plants were observed in the compacted soil of the actual trails and paths. A summary of knotweed patch attributes, associated plant species, and observed threats at each patch are found in Table 2.

Table 2. Summary of field data for Bidwell's knotweed occurrences[1] mapped at Peregrine Point Disc Golf Course, April 26, 2013.

Polygon ID #	# plants	% in bud	% in flwr	Knotweed Associates	Observed Threats
POBI-1	500-1000	0	100	*Parvisedum pumilum, Selaginella hansenii, Allium amplectens, Minuartia douglasii*	No obvious threats. Possible competition with annual grasses.
POBI-2	500-1000	5	90	*Parvisedum pumilum, Selaginella hansenii, Minuartia douglasii,* algal crust	No obvious threats. Possible competition with annual grasses
POBI-3	<50	0	50	*Selaginella hansenii,* Algal crust, *Parvisedum pumilum, Minuartia douglasii,*	Trampling/erosion
POBI-4	< 50	0	100	*Parvisedum pumilum,* algal crust	No obvious threats
POBI-5	100-500	10	90	*Hypochaeris, Navarretia sp., Bromus hordeaceus,* algal crust	No obvious threats
POBI-6	50-100	0	100	*Lasthenia, Minuartia douglasii, Trifolium depauperatum, Navarretia sp.,*	Trampling/erosion; esp. fairway to basket #17
POBI-7	7	0	0	*Navarretia sp., Chlorogalum angustifolium, Parvisedum pumilum, Bromus hordeaceus*	Trampling/erosion
POBI-8	100-300	5	95	Algal crust, *Selaginella hansenii*	No obvious threats
POBI-9	500-1000	0	95	Algal crust, *Selaginella hansenii, Chorizanthe stellulata*	No obvious threats. Potential mountain bike impacts.
POBI-10	100-200	5	95	Algal crust, *Selaginella hansenii*	No obvious threats. Potential mountain bike impacts.
POBI-12	100-300	0	20	*Selaginella hansenii*, *Parvisedum pumilum, Navarretia* sp.	Mountain bike impacts.
POBI-13	100-300	0	80	*Chorizanthe stellulata, Clarkia purpurea, Selaginella hansenii, Hypochaeris glabra.*	No obvious threats. Potential mountain bike impacts.
POBI-14	100-300	0	50	*Selaginella hansenii,* algal crust, *Chorizanthe stellulata, Clarkia purpurea, Hypochaeris glabra.*	No obvious threats
POBI-15	1000	0	50	*Chorizanthe stellulata, Selaginella hansenii,* algal *crust*	No obvious threats
POBI-16	500-1000	0	50	*Selaginella hansenii, algal crust, annual grasses*	No obvious threats
POBI-17	10	10	90	*Selaginella hansenii,* algal crust, *Clarkia purpurea*	Potential trampling.

[1] The knotweed occurrence noted as POBI-11 in 2012 appears to have been extirpated due to bicycle-related disturbance. For sake of clarity, this polygon identification number was not reused in 2013.

Trampling and associated erosion was observed along both designated fairways and undesignated trails within proximity of a majority of the knotweed patches. A new development in 2013 is the existence of a heavily impacted area between polygons 9, 10, and 12. This area is used by a mountain bike group. The perimeter fence near CG-5 has been cut and the wires pulled back. The bikers pass through the hole in the fence, ride up a short incline and stop at a flat spot near POBI-12 before riding through the study area. (Shawn Hughes, pers.com). This gathering place is on the thin soils and exposed rock on an old trail between baskets 11 and 16, (See "X" north of CG-5 on Figure 2). Soil previously covered by plant associates of knotweed and algal crust is now bare and eroded. This location coincides with the knotweed polygon, noted in 2012 as POBI-11, which was not relocated. This knotweed occurrence appears to have been extirpated, although it is possible that the soil contains seeds from previous years. This new trail will potentially impact more knotweed patches and checkerbloom plants as more riders use it.

Incidental Observations

In 2011, a large infestation (tens of thousands of individuals) of barbed goat grass (*Aegilops triuncialis*) was observed in the grassland area southwest of the 9th fairway and north of the large wildflower field containing knotweed (south of 8th and 9th fairways and west of the 10th tee). This CDFA List B noxious weed (California Department of Food and Agriculture 2011) was relocated in 2013. The extent of the infestation and the number of individuals appeared to be smaller in 2013.

VI. CONCLUSION

Butte County checkerbloom and Bidwell's knotweed plants were relocated and mapped at most of the locations within the area surveyed in 2012, including all those within the main disc golf area. Checkerbloom plants and habitat were in good condition. Of the 160 checkerbloom units mapped in 2013, less than one third (31%) produced reproductive structures. A little more than 40% of the total racemes counted showed signs of herbivory. The extent of knotweed within the wildflower fields was smaller and plants were more sparsely distributed than observed in previous years. Individual plants were short statured with little branching.

The noxious weed barbed goat grass population observed in 2011 was relocated again this year, though the population appears to have decreased in numbers in 2013. Long-term threats to checkerbloom and knotweed continue to be trampling, soil erosion, herbivory, and competition by exotic grasses. Both rare plant populations are newly threatened by the immediate impacts of mountain bike activity.

VII. REFERENCES

Baldwin, B., D. H. Goldman, K. D. J., R. Patterson, T. J. Rosatti, and D. H. Wilken, eds. 2012. *The Jepson manual: vascular plants of California, 2nd edition*. Berkeley: University of California Press.

California Department of Food and Agriculture. 2011. *Encycloweedia data sheets.* Available online at http://www.cdfa.ca.gov/phpps/ipc/weedinfo/aegilops.htm#anchor483319

City of Chico and EDAW. 2008. *Bidwell Park Disc Golf/Trailhead Area Concept Plan Environmental Impact Report – Master Mitigation and Monitoring Plan.*

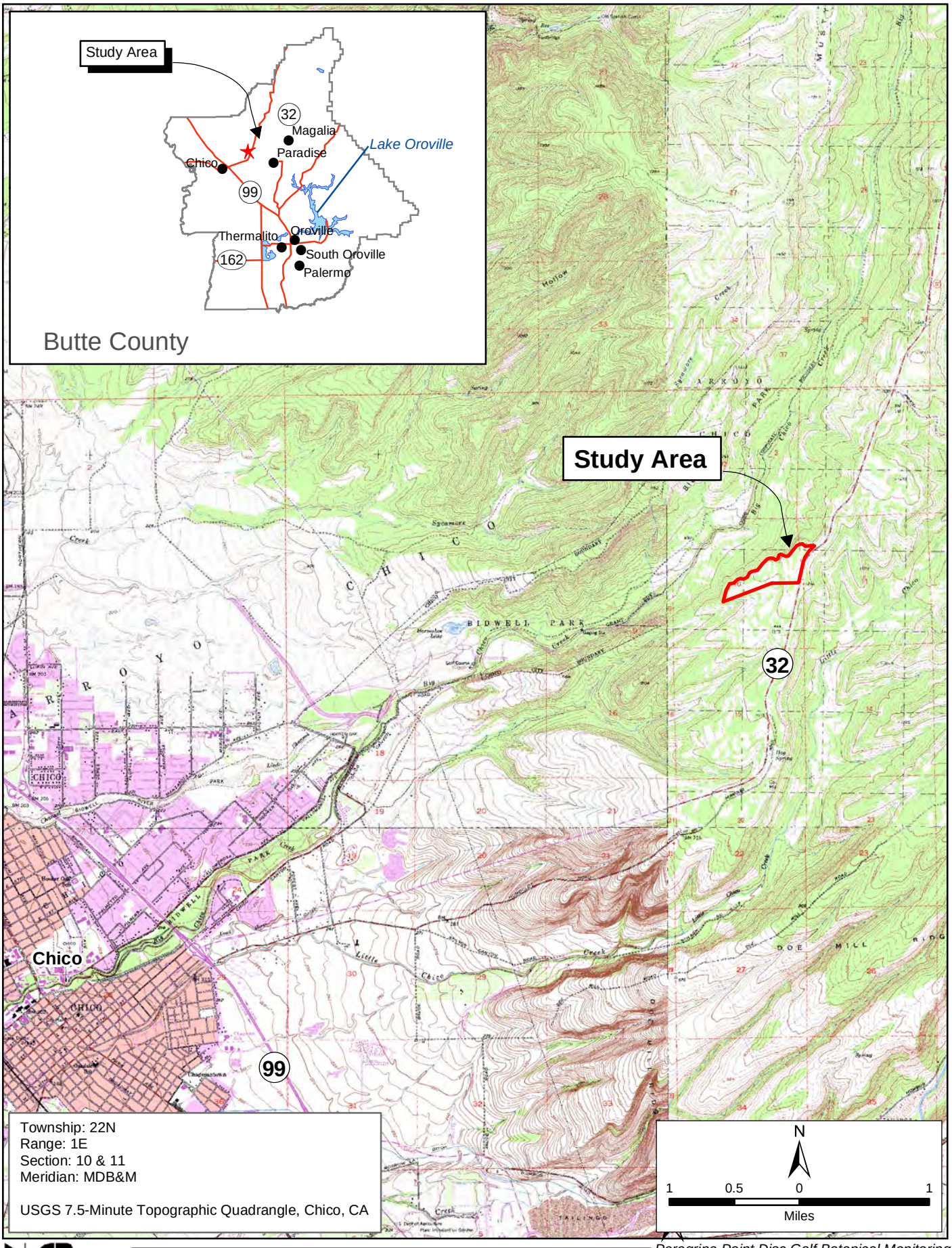
CNDDB. 2008. *California Native Species Field Survey Form.* California Natural Diversity Database. Available at http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf.

Hantelman, C. 2004. *Ecological Life History of a checkerbloom,* Sidalcea robusta *(Malvaceae), a rare endemic plant of Butte County, California*. Masters' Thesis, California State University, Chico. Chico, CA.

Hughes, Shawn. President of Chico Outsiders disc golf organization. April 26, 2013. Spoke with Christine Hantelman in person at study area about the mountain bike trail and barbed goatgrass.

North State Resources 2011. NSR No. 51325 - Peregrine Point Disc Golf Course Botanical Monitoring Technical Memorandum.

U.S. Department of Agriculture and Natural Resources Conservation Service. 2006. *Soil survey of Butte area, California, parts of Butte and Plumas counties.* Washington, D.C.: U.S. Government Printing Office.



G:\Projects\51325_Bidwell_Disc_Golf\GIS\Working_Mxds\51325_Figure_1_Location.mxd Created: 2011-06-28

North State Resources, Inc.

Peregrine Point Disc Golf Botanical Monitoring

Figure 1
Study Area Location and Vicinity

G:\Projects\51325 Bidwell Disc Golf\GIS\Working Mxds\51325 Fig 2 results 2013.mxd Created: 2013-09-26 pkirk

North State Resources, Inc.

Figure 2
Checkerbloom and Knotweed Locations - 2013 Survey

Appendix E – [NSR]. North State Resources. 2013. 2013 Peregrine Point Disc Golf Course Oak Tree Assessment and Monitoring Report (NSR Project No. 51325). Scott Gregory. December 24, 2013. Chico, California.

North State Resources, Inc.

Technical Memorandum

Date: December 24, 2013

To: Mr. Dan Efseaff
City of Chico
Department of Parks and Natural Resources
965 Fir Street
Chico, CA 95928

From: Mr. Scott Gregory, Biologist
North State Resources, Inc.
500 Orient Street, Suite 150
Chico, CA 95928

Subject: **2013 Peregrine Point Disc Golf Course Oak Tree Assessment and Monitoring Report (NSR Project No. 51325)**

I. INTRODUCTION

On behalf of the City of Chico (City) and Outdoor Recreation Advocacy, Inc. (ORAI), North State Resources, Inc. (NSR) conducted an arborist survey of the Peregrine Point Disc Golf Course, hereinafter referred to as the "study area". This memorandum summarizes the findings of the 2013 arborist survey which is the third year of assessment and monitoring for three populations of native oak trees (*Quercus* spp.) in the study area.

II. PROJECT LOCATION

The study area is approximately 70 acres in size, and is located on the west side of State Highway 32 in Butte County, California. The study area is located in the eastern portion of Upper Bidwell Park on the south rim of the ridge overlooking Big Chico Creek at an elevation range of 1,050 to 1,300 feet above mean sea level.

III. PHYSICAL AND BIOLOGICAL SETTING

The study area is sited upon volcanic mudflow breccia that is part of the Tuscan Formation, with thin soils that are low in organic matter. The study area is frequently used by disc golf enthusiasts, hikers, and cyclists. Footpaths and trails, eroded soils,

trampled plants, and impacted trees are some examples of disturbances at the study area that reflect its current and historic use.

Vegetation within the study area is a mix of blue oak (*Quercus douglasii*) savannah with sparse, scattered tree cover and blue oak/foothill woodland with foothill pine (*Pinus sabiniana*) and interior live oak (*Quercus wislizenii*), interspersed with understory shrubs and vines, annual grasses and forbs, and exposed volcanic mudflow.

IV. SURVEY METHODOLOGY

Oak trees within the study area were surveyed on foot by Scott Gregory, International Society of Arboriculture (ISA) Certified Arborist WE-9041A on October 3, 2013.

Data Collection

Year 3 oak tree data were collected using an Archer GPS field computer using a data dictionary developed jointly by the City of Chico and Scott Gregory in 2012. The boundaries of the study area and the location of the surveyed trees are illustrated on the map provided in Attachment A.

Each surveyed oak was measured and assessed for diameter at breast height (DBH), height class, tree condition class, proportion of the tree exhibiting impact marks, number of areas on the tree exhibiting deep wounding of the bark to the cork cambium depth, proportion of the canopy exhibiting dead wood, total number of broken branches in the canopy, tree species, growth form, and width of tree crown along the north–south bearing. Where surveyed oaks had multiple dominant stems originating below breast height, DBH was measured for each stem. All other attributes were assessed for the entire tree rather than stem-wise to maintain consistency with the 2011 and 2012 project protocol.

Priority 1 Oaks

Oaks located in an area of influence of disc golf activity with a high potential for impacts by discs were identified by City of Chico Department of Parks and Natural Resources in 2011 as Priority 1 oaks. Priority 1 oaks were located in the field using existing Geographic Information Systems (GIS) coordinate data provided by the City of Chico.

Transect Oaks

Oak trees within each of the four interrupted belt transect quadrants (01-001, 01-002, 01-003, 01-004) established in 2011 between the course entrance and the Hole 5 tee box were surveyed and assessed using the same parameters described above for Priority 1 oaks.

Reference Oaks

A random sample of oaks within outer bounds of the disc golf course, but outside the field of play of individual fairway boundaries, was designated by City of Chico Department of Parks and Natural Resources in 2011 as a reference population for monitoring and comparison to Priority 1 and Transect oak data. Reference oaks were surveyed and assessed using the same parameters described above for Priority 1 and Transect oaks.

V. RESULTS

Priority 1 Oaks

The population of Priority 1 oaks consists of 32 blue oaks and one interior live oak, with a total of 38 stems. These trees were re-visited and assessed during the 2013 monitoring survey. The stem count was reduced from 39 stems as a result of the disappearance of one stem from a multi-stemmed blue oak. Summary 2013 Priority 1 oak data are presented in Tables 1–7 in Attachment B.

Transect Oaks

The population of Transect oaks consists of nine trees with a total of 10 stems. The first tree associated with each transect segment represents the starting point of that respective segment. Summary 2013 Transect oak data are presented in Tables 1–7 in Attachment B.

Reference Oaks

The population of Reference oaks consists of 35 trees, of which 32 are blue oaks and three are interior live oaks, with a total of 52 stems. Summary 2013 Reference oak data are presented in Tables 1–7 in Attachment B.

VI. DISCUSSION

This report presents results from the third annual assessment of 77 oak trees (100 stems) within the bounds of the study area. Three established populations of survey trees (Priority 1, Reference, and Transect oaks) will continue to be evaluated annually to monitor the possible effects of disc golf activities on oak trees in the study area.

Multiple dominant stems on a tree originating below breast height were treated as separate trees in calculating diameter (DBH) summary data. Summary data for all other attributes were assessed for the entire tree rather than stem-wise.

Drought stress was evident in nearly all of the observed oaks in the three study populations, as well as other oaks not associated with the study. Observed symptoms of drought stress included sparse leaves in the canopy due to premature leaf drop, arrested

acorn development, and increased mortality. Blue oaks exhibited significantly more pronounced symptoms of drought stress than interior live oaks. Blue oaks are adapted to dry growing conditions however, and if more moisture is available in 2014, it is possible for some trees to recover from the drought stress exhibited in 2013.

Future surveys are required in order to gain a better long-term understanding of how recreational use of the Peregrine Point Disc Golf Course impacts the oak trees in the study area, including their ability to recover from seasonal stressors such as drought.

Thank you for providing NSR with the opportunity to assist the City of Chico with monitoring of its native oak trees in the Peregrine Point Disc Golf Course. If you have any questions or require additional information, please contact NSR Biologist Scott Gregory by telephone at (530) 345-4552 ext. 209, or by e-mail at gregory@nsrnet.com.

Sincerely,

Scott Gregory, Biologist
Certified Arborist #WE-9041A, International Society of Arboriculture

Appendices: Attachment A: Tree Locations Map
Attachment B: Summary Data

cc: Lise Smith-Peters, Park Services Coordinator, City of Chico

ATTACHMENT A

Locations of Surveyed Oak Trees Map

Priority 1 Oaks
Transcribe Oaks
Reference Oaks
Tee Pads
Baskets
Area of Influence
Course Boundary
Study Area Boundary

N
150 75 0 150
Feet

4 R03-001 03-002 3 03-001
R04-002a-d R04-001 4b R13-001a-b R02-001a-b
5 R05-002 R05-001a-b 13-002a-b
R12-003 R12-002 14
T1-04-02 12-006 13 02-002
T1-04-01 T1-03-01 13-003 02-001
12-005 14-001a-b
R05-003 R05-004a-b 12-004 12-007 13-001
R05-005 12-003 R14-001a-b
R06-001a-b 15 R14-002a-c
T1-02-02a-b
6 12-001 12-002 T1-02-01 14-002a-b
12 R15-001a-b 14-003 T1-01-03
T1-01-02
R06-003 11-004 R16-001 R17-003 T1-01-01
R07-001 R12-001a-b 2
7 T1-01-04 01-004
R09-001 R06-002 11-003 16-001 R17-001 01-003 R01-002a-c
9 R09-002 R11-001 11-002a-b 17 17-001 01-002
11-001a-b 16 16-002 R01-004 01-001
R15-002 R17-002 18
R08-002a-c 09-001 18-001 1
09-002 11 10-001a-b 18-002 R01-001
R09-003 R10-001
8 10
R08-001

North State Resources, Inc.

Attachment A - Locations of Surveyed Oak Trees

ATTACHMENT B

Summary Data

Table 1 - Percent Composition of Diameter Classes

DBH (inches)	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
0-6	7.9	9.6	10.0
6-12	65.8	63.5	60.0
12-18	13.2	17.3	20.0
18-24	7.9	7.7	0.0
24-30	2.6	1.9	10.0
>30	2.6	0.0	0.0

Table 2 - Percent Composition of Height Classes

Height (feet)	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
0-5	0.0	0.0	10.0
6-10	5.3	1.9	0.0
11-15	13.2	28.8	0.0
>15	81.6	69.2	90.0

Table 3 - Percent Composition of Condition Classes

Condition	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
Excellent	0.0	0.0	0.0
Good	7.9	5.8	0.0
Fair	36.8	55.8	50.0
Poor	50.0	34.6	50.0
Dead	5.3	3.8	0.0

Table 4 - Percent Composition of Trunk Impacts Classes

Percent Trunk Impacted	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
0	0.0	62.9	70.0
1-25	15.8	21.2	30.0
26-50	28.9	7.7	0.0
51-75	36.8	1.9	0.0
>75	18.4	0.0	0.0

Table 5 - Percent Composition of Dead Canopy Classes

Percent Dead Canopy	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
0	0.0	0	0.0
1-25	68.4	69.2	70.0
26-50	21.1	23.1	20.0
51-75	5.3	3.8	10.0
>75	5.3	3.8	0.0

Table 6 - Percent Composition of Broken Branch Count

Number of Broken Branches	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
0	0	9.6	0
1	0	19.2	9.7
2	10.5	15.4	0
3	5.3	9.6	9.7
4	5.3	13.5	51.6
5	15.8	7.7	0.0
6	10.5	5.8	0.0
7	10.5	0.0	0.0
8	13.2	5.8	0.0
9	15.8	1.9	29.0
≥10	13.2	11.6	0.0

Table 7 - Percent Composition of Damaged Bark Patch Count

Number of Damaged Bark Patches	Percent of Priority 1 Population (%)	Percent of Reference Population (%)	Percent of Transect Population (%)
0	47.4	84.6	70.0
1	18.4	3.8	0.0
2	13.2	3.8	10.0
3	7.9	1.9	10.0
4	2.6	0.0	10.0
5	2.6	1.9	0.0
6	7.9	3.8	0.0
7	0.0	0.0	0.0
8	0.0	0.0	0.0
9	0.0	0.0	0.0
≥10	0.0	0.0	0.0

Appendix F – Statistical Analysis

4/1/2014 12:58:27 PM

Welcome to Minitab, press F1 for help.

Descriptive Statistics: DBH_(inches), Tree_Ht_(ft), Crown_Width_, ...

Variable	In_course(y/n)	N	N*	Mean	SE Mean	StDev	Minimum
DBH_(inches)	N	52	0	10.096	0.670	4.832	2.000
	Y	38	0	10.947	0.960	5.918	4.000
Tree_Ht_(ft)	N	52	0	19.673	0.803	5.793	6.000
	Y	38	0	20.55	1.06	6.56	10.00
Crown_Width_(ft)	N	52	0	20.60	1.49	10.74	6.00
	Y	38	0	18.34	1.28	7.92	6.00
Trunk_quad_impts	N	52	0	0.423	0.100	0.723	0.000000000
	Y	38	0	2.579	0.158	0.976	1.000
Damaged_bark_ptc	N	52	0	0.500	0.197	1.421	0.000000000
	Y	38	0	1.395	0.303	1.868	0.000000000
Broken_branches_	N	52	0	3.904	0.456	3.285	0.000000000
	Y	38	0	6.526	0.416	2.565	2.000
Dead_canopy_corr	N	52	0	23.58	2.60	18.75	13.00
	Y	38	0	24.84	3.37	20.74	13.00

Variable	In_course(y/n)	Q1	Median	Q3
DBH_(inches)	N	7.000	9.000	12.000
	Y	7.000	9.000	12.000
Tree_Ht_(ft)	N	15.000	18.000	25.000
	Y	16.00	20.00	24.00
Crown_Width_(ft)	N	14.00	18.00	23.50
	Y	12.25	17.50	24.00
Trunk_quad_impts	N	0.000000000	0.000000000	1.000
	Y	2.000	3.000	3.000
Damaged_bark_ptc	N	0.000000000	0.000000000	0.000000000
	Y	0.000000000	1.000	2.000
Broken_branches_	N	1.000	3.000	5.750
	Y	5.000	7.000	9.000
Dead_canopy_corr	N	13.00	13.00	38.00
	Y	13.00	13.00	38.00

Variable	In_course(y/n)	Maximum
DBH_(inches)	N	24.000
	Y	30.000
Tree_Ht_(ft)	N	32.000
	Y	32.00
Crown_Width_(ft)	N	48.00
	Y	37.00
Trunk_quad_impts	N	3.000
	Y	4.000
Damaged_bark_ptc	N	6.000
	Y	6.000
Broken_branches_	N	11.000

```
                 Y               10.000

Dead_canopy_corr  N                88.00
                  Y                88.00
```

One-way ANOVA: DBH_(inches) versus In_course(y/n)

```
Source          DF      SS    MS     F      P
In_course(y/n)   1    15.9  15.9  0.56  0.455
Error           88  2486.4  28.3
Total           89  2502.3

S = 5.316   R-Sq = 0.64%   R-Sq(adj) = 0.00%


                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N    Mean  StDev  --------+---------+---------+---------+-
N      52  10.096  4.832  (-----------*-----------)
Y      38  10.947  5.918       (-------------*--------------)
                          --------+---------+---------+---------+-
                                9.6      10.8      12.0      13.2

Pooled StDev = 5.316
```

One-way ANOVA: Tree_Ht_(ft) versus In_course(y/n)

```
Source          DF      SS    MS     F      P
In_course(y/n)   1    17.0  17.0  0.45  0.503
Error           88  3304.8  37.6
Total           89  3321.8

S = 6.128   R-Sq = 0.51%   R-Sq(adj) = 0.00%


                          Individual 95% CIs For Mean Based on Pooled
                          StDev
Level   N    Mean  StDev     +---------+---------+---------+---------
N      52  19.673  5.793     (-------------*-------------)
Y      38  20.553  6.562          (---------------*----------------)
                             +---------+---------+---------+---------
                          18.0      19.2      20.4      21.6
Pooled StDev = 6.128
```

One-way ANOVA: Crown_Width_(ft) versus In_course(y/n)

```
Source          DF      SS     MS     F      P
In_course(y/n)   1   111.6  111.6  1.20  0.277
Error           88  8205.1   93.2
Total           89  8316.6

S = 9.656   R-Sq = 1.34%   R-Sq(adj) = 0.22%

                           Individual 95% CIs For Mean Based on
                           Pooled StDev
Level   N    Mean   StDev  ---------+---------+---------+---------+
N      52  20.596  10.743             (---------*----------)
Y      38  18.342   7.916  (-----------*------------)
                           ---------+---------+---------+---------+
                                 17.5      20.0      22.5      25.0
Pooled StDev = 9.656
```

One-way ANOVA: Trunk_quad_impts_(No) versus In_course(y/n)

```
Source          DF       SS       MS       F      P
In_course(y/n)   1  102.045  102.045  144.94  0.000
Error           88   61.955    0.704
Total           89  164.000

S = 0.8391   R-Sq = 62.22%   R-Sq(adj) = 61.79%
```

```
                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N    Mean   StDev  -------+---------+---------+---------+--
N      52  0.4231  0.7234  (--*--)
Y      38  2.5789  0.9762                              (---*---)
                          -------+---------+---------+---------+--
                               0.70      1.40      2.10      2.80
Pooled StDev = 0.8391
```

One-way ANOVA: Damaged_bark_ptchs_(0->10) versus In_course(y/n)

```
Source          DF      SS     MS     F      P
In_course(y/n)   1   17.58  17.58  6.66  0.011
Error           88  232.08   2.64
Total           89  249.66
S = 1.624   R-Sq = 7.04%   R-Sq(adj) = 5.98%

                         Individual 95% CIs For Mean Based on
                         Pooled StDev
Level   N   Mean  StDev  ---------+---------+---------+---------+
N      52  0.500  1.421  (--------*--------)
Y      38  1.395  1.868                (----------*---------)
                         ---------+---------+---------+---------+
                                0.50      1.00      1.50      2.00
Pooled StDev = 1.624
```

One-way ANOVA: Broken_branches_(0->10) versus In_course(y/n)

```
Source          DF      SS      MS      F      P
In_course(y/n)   1  151.00  151.00  16.74  0.000
Error           88  793.99    9.02
Total           89  944.99
S = 3.004   R-Sq = 15.98%   R-Sq(adj) = 15.02%

                         Individual 95% CIs For Mean Based on
                         Pooled StDev
Level   N   Mean  StDev  ----+---------+---------+---------+-----
N      52  3.904  3.285  (------*-----)
Y      38  6.526  2.565                    (-------*-------)
                         ----+---------+---------+---------+-----
                           3.6       4.8       6.0       7.2
Pooled StDev = 3.004
```

One-way ANOVA: Dead_canopy_corrected_(%) versus In_course(y/n)

```
Source          DF     SS   MS     F      P
In_course(y/n)   1     35   35  0.09  0.763
Error           88  33854  385
Total           89  33889
S = 19.61   R-Sq = 0.10%   R-Sq(adj) = 0.00%

                         Individual 95% CIs For Mean Based on
                         Pooled StDev
Level   N   Mean  StDev  --------+---------+---------+---------+-
N      52  23.58  18.75  (--------------*---------------)
Y      38  24.84  20.74   (-----------------*-----------------)
                         --------+---------+---------+---------+-
                              21.0      24.5      28.0      31.5
Pooled StDev = 19.61
```

One-way ANOVA: Ind_Mistletoe versus In_course(y/n)

```
Source          DF      SS     MS     F      P
In_course(y/n)   1   0.012  0.012  0.09  0.760
Error           88  11.110  0.126
Total           89  11.122
S = 0.3553   R-Sq = 0.11%   R-Sq(adj) = 0.00%

                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N    Mean   StDev  ----+---------+---------+---------+-----
```

```
N      52  0.1346  0.3446  (---------------*----------------)
Y      38  0.1579  0.3695   (-----------------*-----------------)
                           ----+---------+---------+---------+-----
                             0.060     0.120     0.180     0.240
Pooled StDev = 0.3553
```

One-way ANOVA: Cond_no versus In_course(y/n)

```
Source          DF      SS     MS     F      P
In_course(y/n)   1   0.569  0.569  1.20  0.275
Error           88  41.531  0.472
Total           89  42.100
S = 0.6870   R-Sq = 1.35%   R-Sq(adj) = 0.23%

                           Individual 95% CIs For Mean Based on
                           Pooled StDev
Level   N    Mean   StDev  --------+---------+---------+---------+-
N      52  3.3654  0.6577  (-----------*-----------)
Y      38  3.5263  0.7255         (--------------*--------------)
                           --------+---------+---------+---------+-
                                 3.30      3.45      3.60      3.75
Pooled StDev = 0.6870
```

Comparisons between holes:

One-way ANOVA: Trunk_quad_impts_(No) versus Hole

```
Source  DF       SS      MS      F      P
Hole    12  126.608  10.551  21.73  0.000
Error   77   37.392   0.486
Total   89  164.000

S = 0.6969   R-Sq = 77.20%   R-Sq(adj) = 73.65%


                           Individual 95% CIs For Mean Based on
                           Pooled StDev
Level   N    Mean   StDev  --------+---------+---------+---------+-
 0     52  0.4231  0.7234  (-*)
 1      4  3.0000  0.8165                  (-----*-----)
 2      2  2.5000  0.7071            (-------*-------)
 3      2  1.5000  0.7071   (--------*-------)
 9      2  2.5000  0.7071            (-------*-------)
10      2  3.0000  0.0000                (-------*-------)
11      5  3.6000  0.5477                        (----*----)
12      7  3.0000  0.8165                    (---*---)
13      4  2.0000  0.0000          (-----*----)
14      5  1.0000  0.0000   (----*-----)
16      2  3.0000  1.4142                (-------*-------)
17      1  3.0000       *            (-----------*-----------)
18      2  3.0000  0.0000                (-------*-------)
                           --------+---------+---------+---------+-
                                 1.2       2.4       3.6       4.8
Pooled StDev = 0.6969
```

One-way ANOVA: Damaged_bark_ptchs_(0->10) versus Hole

```
Source  DF      SS    MS     F      P
Hole    12   77.19  6.43  2.87  0.003
Error   77  172.46  2.24
Total   89  249.66

S = 1.497   R-Sq = 30.92%   R-Sq(adj) = 20.15%

                          Individual 95% CIs For Mean Based on Pooled
                          StDev
Level   N   Mean  StDev   -+---------+---------+---------+--------
 0     52  0.500  1.421              (-*--)
 1      4  4.250  1.708                              (------*-------)
 2      2  0.000  0.000    (----------*----------)
 3      2  0.000  0.000    (----------*----------)
 9      2  0.500  0.707       (---------*----------)
```

```
10      2  1.500  2.121            (---------*----------)
11      5  2.600  2.302                     (------*------)
12      7  1.429  2.149                 (----*-----)
13      4  0.000  0.000        (------*------)
14      5  0.800  1.095            (------*------)
16      2  1.000  0.000         (----------*----------)
17      1  1.000      *     (--------------*--------------)
18      2  1.000  1.414         (----------*----------)
                          -+---------+---------+---------+--------
                         -2.0       0.0       2.0       4.0
Pooled StDev = 1.497
```

One-way ANOVA: Broken_branches_(0->10) versus Hole

```
Source  DF      SS     MS     F      P
Hole    12  269.47  22.46  2.56  0.007
Error   77  675.52   8.77
Total   89  944.99
S = 2.962   R-Sq = 28.52%   R-Sq(adj) = 17.38%

                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N   Mean  StDev  --------+---------+---------+---------+-
 0     52  3.904  3.285               (-*)
 1      4  5.750  0.957               (-----*----)
 2      2  5.000  2.828           (-------*-------)
 3      2  2.500  0.707       (-------*-------)
 9      2  5.000  0.000           (-------*-------)
10      2  9.000  0.000                    (-------*-------)
11      5  7.200  1.789                 (----*-----)
12      7  7.000  2.887                  (---*---)
13      4  5.250  0.957              (-----*----)
14      5  7.600  3.286                   (----*----)
16      2  8.500  2.121                (-------*-------)
17      1  2.000      *  (-----------*-----------)
18      2  9.500  0.707                     (-------*-------)
                          --------+---------+---------+---------+-
                                0.0       5.0      10.0      15.0
Pooled StDev = 2.962
```

One-way ANOVA: Dead_canopy_corrected_(%) versus Hole

```
Source  DF     SS   MS     F      P
Hole    12   5264  439  1.18  0.312
Error   77  28625  372
Total   89  33889
S = 19.28   R-Sq = 15.53%   R-Sq(adj) = 2.37%

                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N   Mean  StDev    +---------+---------+---------+---------
 0     52  23.58  18.75                   (-*--)
 1      4  31.75  12.50                (-------*------)
 2      2  25.50  17.68            (----------*----------)
 3      2  25.50  17.68            (----------*----------)
 9      2  25.50  17.68            (----------*----------)
10      2  13.00   0.00        (----------*----------)
11      5  48.00  37.91                       (------*------)
12      7  16.57   9.45              (-----*----)
13      4  13.00   0.00           (------*-------)
14      5  33.00  27.39                    (------*------)
16      2  13.00   0.00        (----------*----------)
17      1  13.00      *    (--------------*---------------)
18      2  13.00   0.00        (----------*----------)
                          +---------+---------+---------+---------
                          -25         0        25        50
Pooled StDev = 19.28
```

One-way ANOVA: Ind_Mistletoe versus Hole

```
Source  DF      SS     MS     F      P
Hole    12   1.636  0.136  1.11  0.367
```

```
Error   77   9.486  0.123
Total   89  11.122
S = 0.3510   R-Sq = 14.71%   R-Sq(adj) = 1.42%

                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N    Mean   StDev  ----+---------+---------+---------+-----
 0     52  0.1346  0.3446               (-*-)
 1      4  0.5000  0.5774                 (------*------)
 2      2  0.5000  0.7071               (---------*---------)
 3      2  0.0000  0.0000     (---------*---------)
 9      2  0.0000  0.0000     (---------*---------)
10      2  0.0000  0.0000     (---------*---------)
11      5  0.0000  0.0000         (-----*-----)
12      7  0.2857  0.4880               (-----*----)
13      4  0.0000  0.0000        (------*------)
14      5  0.0000  0.0000         (-----*-----)
16      2  0.5000  0.7071               (---------*---------)
17      1  0.0000       *  (-------------*-------------)
18      2  0.0000  0.0000     (---------*---------)
                          ----+---------+---------+---------+-----
                           -0.50      0.00      0.50      1.00
Pooled StDev = 0.3510
```

One-way ANOVA: Cond_no versus Hole

```
Source  DF      SS     MS     F      P
Hole    12   5.778  0.482  1.02  0.439
Error   77  36.322  0.472
Total   89  42.100
S = 0.6868   R-Sq = 13.72%   R-Sq(adj) = 0.28%

                          Individual 95% CIs For Mean Based on
                          Pooled StDev
Level   N    Mean   StDev  ---------+---------+---------+---------+
 0     52  3.3654  0.6577            (-*-)
 1      4  3.5000  0.5774        (------*------)
 2      2  3.5000  0.7071     (---------*---------)
 3      2  3.5000  0.7071     (---------*---------)
 9      2  3.5000  0.7071     (---------*---------)
10      2  4.0000  0.0000          (---------*---------)
11      5  4.0000  1.2247              (-----*-----)
12      7  3.5714  0.5345           (----*----)
13      4  2.7500  0.5000  (------*-----)
14      5  3.2000  0.8367      (-----*-----)
16      2  4.0000  0.0000          (---------*---------)
17      1  4.0000       *       (-------------*-------------)
18      2  3.5000  0.7071     (---------*---------)
                          ---------+---------+---------+---------+
                                 3.0       4.0       5.0       6.0
Pooled StDev = 0.6868
```

Appendix G – Example of Statistical Analysis of Broken Branches
Comparison between Years

General Linear Model: Broken_branc versus Priority_tre, Year, Tree_ID

Factor	Type	Levels	Values
Priority_tree	fixed	2	0, 1
Tree_ID(Priority_tree)	fixed	90	R01-001, R01-002a, R01-002b, R01-002c, R01-003, R02-001a, R02-001b, R03-001, R04-001, R04-002a, R04-002b, R04-002c, R04-002d, R05-001a, R05-001b, R05-002, R05-003, R05-004a, R05-004b, R05-005, R06-001a, R06-001b, R06-002, R06-003, R07-001, R08-001, R08-002a, R08-002b, R08-002c, R09-001, R09-002, R09-003, R10-001, R11-001, R12-001a, R12-001b, R12-002, R12-003, R13-001a, R13-001b, R14-001a, R14-001b, R14-002a, R14-002b, R14-002c, R15-001a, R15-001b, R15-002, R16-001, R17-001, R17-002, R17-003, 01-001, 01-002, 01-003, 01-004, 02-001, 02-002, 03-001, 03-002, 09-001, 09-002, 10-001a, 10-001b, 11-001a, 11-001b, 11-002a, 11-003, 11-004, 12-001, 12-002, 12-003, 12-004, 12-005, 12-006, 12-007, 13-001, 13-002a, 13-002b, 13-003, 14-001a, 14-001b, 14-002a, 14-002b, 14-003, 16-001, 16-002, 17-001, 18-001, 18-002
Year	fixed	3	2011, 2012, 2013

Analysis of Variance for Broken_branches_(0->10), using Adjusted SS for Tests

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Priority_tree	1	134.721	134.721	134.721	58.77	0.000
Tree_ID(Priority_tree)	88	1803.812	1803.812	20.498	8.94	0.000
Year	2	269.267	307.902	153.951	67.16	0.000
Priority_tree*Year	2	73.976	73.976	36.988	16.14	0.000
Error	176	403.424	403.424	2.292		
Total	269	2685.200				

S = 1.51399 R-Sq = 84.98% R-Sq(adj) = 77.04%

Unusual Observations for Broken_branches_(0->10)

Obs	Broken_branches_(0->10)	Fit	SE Fit	Residual	St Resid
18	0.0000	4.2456	0.8968	-4.2456	-3.48 R
19	0.0000	3.2456	0.8968	-3.2456	-2.66 R
21	1.0000	3.5789	0.8968	-2.5789	-2.11 R
73	1.0000	6.9615	0.8908	-5.9615	-4.87 R
74	1.0000	6.9615	0.8908	-5.9615	-4.87 R
91	0.0000	2.5877	0.8968	-2.5877	-2.12 R
105	1.0000	3.9211	0.8968	-2.9211	-2.39 R
163	11.0000	7.7308	0.8908	3.2692	2.67 R
164	11.0000	7.7308	0.8908	3.2692	2.67 R
181	7.0000	4.1667	0.8968	2.8333	2.32 R
253	11.0000	8.3077	0.8908	2.6923	2.20 R

254 11.0000 8.3077 0.8908 2.6923 2.20 R

R denotes an observation with a large standardized residual.

Tukey 95.0% Simultaneous Confidence Intervals
Response Variable Broken_branches_(0->10)
All Pairwise Comparisons among Levels of Priority_tree
Priority_tree = 0 subtracted from:

```
Priority_tree  Lower  Center  Upper  -------+---------+---------+---------
1              1.062  1.430   1.798  (-----------------*-----------------)
                                     -------+---------+---------+---------
                                          1.20      1.40      1.60
```

Tukey Simultaneous Tests
Response Variable Broken_branches_(0->10)
All Pairwise Comparisons among Levels of Priority_tree
Priority_tree = 0 subtracted from:

Priority_tree	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	1.430	0.1865	7.666	0.0000

Tukey 95.0% Simultaneous Confidence Intervals
Response Variable Broken_branches_(0->10)
All Pairwise Comparisons among Levels of Year
Year = 2011 subtracted from:

```
Year  Lower  Center  Upper  ---+---------+---------+---------+---
2012  1.016  1.556   2.095        (-----*------)
2013  2.094  2.634   3.173                (------*------)
                    ---+---------+---------+---------+---
                     0.80      1.60      2.40      3.20
```

Year = 2012 subtracted from:

```
Year  Lower  Center  Upper  ---+---------+---------+---------+---
2013  0.5383  1.078  1.618  (-----*------)
                    ---+---------+---------+---------+---
                     0.80      1.60      2.40      3.20
```

Tukey Simultaneous Tests
Response Variable Broken_branches_(0->10)
All Pairwise Comparisons among Levels of Year
Year = 2011 subtracted from:

Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
2012	1.556	0.2285	6.809	0.0000
2013	2.634	0.2285	11.527	0.0000

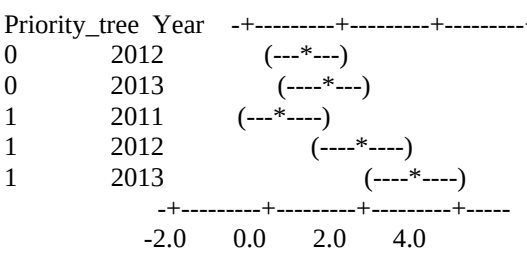
Year = 2012 subtracted from:

Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value

2013 1.078 0.2285 4.718 0.0000

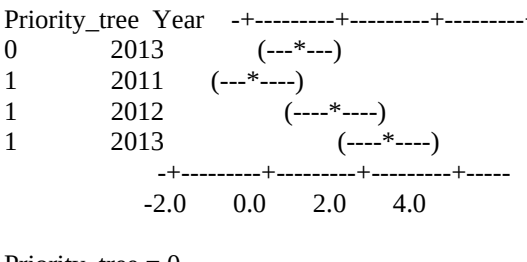
Tukey 95.0% Simultaneous Confidence Intervals
Response Variable Broken_branches_(0->10)
All Pairwise Comparisons among Levels of Priority_tree*Year
Priority_tree = 0
Year = 2011 subtracted from:

Priority_tree	Year	Lower	Center	Upper
0	2012	-0.0874	0.76923	1.6258
0	2013	0.4895	1.34615	2.2028
1	2011	-0.8846	0.04757	0.9797
1	2012	1.4575	2.38968	3.3219
1	2013	3.0364	3.96862	4.9008



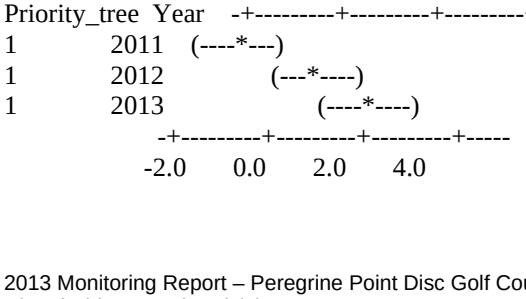
Priority_tree = 0
Year = 2012 subtracted from:

Priority_tree	Year	Lower	Center	Upper
0	2013	-0.280	0.5769	1.4335
1	2011	-1.654	-0.7217	0.2105
1	2012	0.688	1.6204	2.5526
1	2013	2.267	3.1994	4.1316



Priority_tree = 0
Year = 2013 subtracted from:

Priority_tree	Year	Lower	Center	Upper
1	2011	-2.231	-1.299	-0.3664
1	2012	0.111	1.044	1.9757
1	2013	1.690	2.622	3.5546



Priority_tree = 1
Year = 2011 subtracted from:

Priority_tree	Year	Lower	Center	Upper
1	2012	1.340	2.342	3.344
1	2013	2.919	3.921	4.923

```
Priority_tree  Year    -+---------+---------+---------+-----
1              2012                (----*----)
1              2013                      (----*----)
                     -+---------+---------+---------+-----
                    -2.0       0.0       2.0       4.0
```

Priority_tree = 1
Year = 2012 subtracted from:

Priority_tree	Year	Lower	Center	Upper
1	2013	0.5769	1.579	2.581

```
Priority_tree  Year    -+---------+---------+---------+-----
1              2013             (----*----)
                     -+---------+---------+---------+-----
                    -2.0       0.0       2.0       4.0
```

Tukey Simultaneous Tests
Response Variable Broken_branches_(0->10)
All Pairwise Comparisons among Levels of Priority_tree*Year
Priority_tree = 0
Year = 2011 subtracted from:

Priority_tree	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	2012	0.76923	0.2969	2.5907	0.1050
0	2013	1.34615	0.2969	4.5337	0.0002
1	2011	0.04757	0.3231	0.1472	1.0000
1	2012	2.38968	0.3231	7.3958	0.0000
1	2013	3.96862	0.3231	12.2825	0.0000

Priority_tree = 0
Year = 2012 subtracted from:

Priority_tree	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
0	2013	0.5769	0.2969	1.943	0.3797
1	2011	-0.7217	0.3231	-2.233	0.2279
1	2012	1.6204	0.3231	5.015	0.0000
1	2013	3.1994	0.3231	9.902	0.0000

Priority_tree = 0
Year = 2013 subtracted from:

Priority_tree	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	2011	-1.299	0.3231	-4.019	0.0012
1	2012	1.044	0.3231	3.230	0.0182
1	2013	2.622	0.3231	8.116	0.0000

Priority_tree = 1
Year = 2011 subtracted from:

Priority_tree	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	2012	2.342	0.3473	6.743	0.0000
1	2013	3.921	0.3473	11.289	0.0000

Priority_tree = 1
Year = 2012 subtracted from:

Priority_tree	Year	Difference of Means	SE of Difference	T-Value	Adjusted P-Value
1	2013	1.579	0.3473	4.546	0.0002

Tree Committee Report — Meeting Date 6/30/14

DATE: 6/11/2014

TO: Bidwell Park and Playground Commission

FROM: Natural Resources Committee/Park Division Staff

SUBJECT: Staff Report from Tree Committee Meeting (6/11/14)

1. CALL TO ORDER

Chair Richard Ober called the meeting to order at 6:01 pm.

Attendees: Commissioners present: Lisa Emmerich, Richard Ober (Chair), and Janine Rood. Commissioners absent: None. Staff present: Dan Efseaff, and Linda Sheppard. Public: Charles Withuhn, Karen Laslo, Mark Stemen, Susan Mason, and Woody Elliot.

2. REGULAR AGENDA

2.1. Review of Programmatic Tree Removal Permit

Staff reviewed the list of species eligible for the program to help expedite permit requests for undesirable trees. Discussion ensued on the merits of individual species on the list with the Chair grouping them together based on the criteria. Other than some corrections and the addition of an additional species, the Committee expressed comfort with the list. The discussion then shifted to the process and the Administrative Policy and Procedures (AP&P) draft. Commissioners added language to provide for a minimum of quarterly reports to the BPPC, and felt comfortable that with the changes, the Committee would recommend that it go to the full BPPC.

2.2. Review and Develop Draft Urban Forest Management Plan

The Committee continued work on refining the Urban Forest Management Plan (UFMP) and discuss the list of tasks and timeline and refine the goals and objectives from the Draft document. Staff identified a list of tasks but did not associate them with a specific timeline as Council action on filling the Urban Forest Manager position could alter further action on the plan.

Staff described some deficiencies in the current goals and objectives and provided an overview of “SMART” goals to help tighten them up. Though some comments were provided, some members were not prepared to provide detailed comments at the meeting, others noted that the would feel more comfortable if staff provided a revised set of goals to review.

Because of limited staff and need for input, Staff then suggested the idea of a workgroup to meet to provide more focus for the goals. The Committee agreed and directed staff to provide some dates to work on the plan in the near future.

3. BUSINESS FROM THE FLOOR

Members of the public may address the Committee at this time on any matter not already listed on the agenda, comments are limited to three minutes. The Committee cannot take any action at this meeting on requests made under this section of the agenda.

Mark Stemen expressed frustration with of efforts working with the City on the planting of trees related to the Salvation Army tree removal.

4. ADJOURNMENT

Chair Ober adjourned the meeting at 7:25 pm.

Distribution: BPPC

M:\PARK\Admin\BPPC\BPPC_Committee\Tree\2014_Tree\14_0611\TC_mtg_report_14_0611.docx
6/26/2014

BPPC Division Report Meeting Date 6/30/14

DATE: 6/24/14

TO: Bidwell Park and Playground Commission (BPPC)

FROM: Dan Efseaff, Park and Natural Resource Manager

SUBJECT: Parks and Street Trees and Public Landscapes Report

NARRATIVE

1. Updates

a. Highway 32 Widening (Phase I) – Construction for the State Route 32 Widening Project (Phase 1) is scheduled for Monday June 9, 2014. In advance of the construction, City is notifying businesses, property owners, and residents along the project as well as other stakeholders. A pdf of the City's Project Update mailer and the Contractor's Notice of Construction are posted on the City's webpage and mailed to owners and occupants of properties adjacent to Phased 1 construction and other stakeholders.

b. Council Action – Council authorized staff to hire the Urban Forest Manager (as a contract) and Park Services Coordinator Positions. Given the direction from Council, work on the Urban Forest Management Plan will be placed on hold until the function is filled.

c. Lifeguards– Parks is pleased to announce that lifeguards will be working Friday-Sunday at the Sycamore Pool. We were able to get a number of good candidates after reports in the media sparked interested applicants. The California Conservation Corps will supply 3-4 lifeguards and Keith Welch (CCC) also provided certification training for a number of good candidates that did not have all required certifications.

2. Administrative and Visitor Services

a. Walnut Tree Twig Beetle Research – Staff authorized permission for Stacy Hishinuma (Ph.D. candidate, University of California, Davis) to continue to study the progression of disease in walnuts and fungal spores on the beetle population in your area. The work will continue thru the Fall and takes place in Lower Park and the 5-mile Recreation Area.

3. Planning/Monitoring

a. Peregrine Point Monitoring Report – The annual report is attached.

4. Maintenance Program

a. Staff continues daily cleaning and safety inspections of all recreation areas including: grounds, playgrounds, picnic sites, roads and paths, coupled with daily cleaning and re-supplying of all park restrooms. Maintenance and repair of park fixtures, daily opening of gates, posting reservations, unauthorized camp clean up and the constant removal of graffiti from all park infrastructure.

b. **Lower Park:** Staff prepared the Sycamore Pool for the summer season by removing 35 cubic yards of sediment, cleaning the walls and floor of the pool cleaning and stenciling the pool decks, Lifeguard chairs, changing out the fish ladder and dam to summer heights. This season so far we have experienced an increase in the need for maintenance to clean up after run events, promoters are not removing their event markings from road beds as well they have left signs, balloons and ribbons affixed to park infrastructure.

c. **Middle Park:** All areas have been flail mowed at least once and are now receiving herbicide where needed to control invasive plants such as Star thistle, puncture vine and Johnson grass.

d. **Upper Park:** Crews prepared the Horseshoe Lake area for the annul Hooked on Fishing not Drugs event; they also worked on some updates to the ADA portion of the Middle trail grant in preparation for the ribbon cutting on the June 6th.

e. **Upcoming Projects:** no parking signs at Lot C, second visit to Ceres St. Bridge to replace more boards, prep for Fourth of July and Volunteer support and cleanup.

5. Ranger and Lifeguard Programs

a. Busy Graduation Weekend – Park rangers issued numerous glass and alcohol warning to graduates and families. The gate on Upper Park Road at the Diversion Dam was mysteriously opened. Rangers experienced a mob of over 40 slightly too very intoxicated students and parents at Salmon Hole. Rangers were able to move the group out of the swimming area. They were assisted by CA Department of Fish and Wildlife Wardens in the parking lot to ensure everyone left the park safely.

b. Memorial Day Weekend – Park rangers were patrolling on foot, on bike and by vehicle in all areas of the park. The Sycamore Pool was an area of emphasis due to the lack of lifeguards. Park Watch volunteers were out in numbers and had an information table set up at South 1 Mile. Violations of park regulations were within typical range for the holiday weekend.

c. Lifeguards – Several interviews have been conducted and the best candidates are in the hiring process. Keith Welch from the California Conservation Corps will be conducting a certification class June 20th – 23rd to fill in any certification gaps applicants may have. A possible abbreviated lifeguard staff may start on Friday June 20th with a target of full staff to begin on the 28th.

d. Significant Incidents - On 5/14 a stolen vehicle was recovered in the parking lot at the Peterson Memorial entrance. It appears the car was dumped and stripped there the night before.

On 5/29 rangers received a report of 2 very intoxicated subjects in the area of South 1 Mile. One of the subjects was allegedly urinating in front of a group of elementary age students. Rangers were able to contact the subjects, one of whom became agitated. With the assistance of 2 Chico Police Officers, the subjects were both arrested and charged with drunk in public and glass and alcohol violations.

6. Natural Resource Management

a. Arundo Removal – Susan Mason and John Cervantes have led the charge on the removal of arundo on City property along Little Chico Creek (see photos).

b. Yellow Star Thistle Control – Herbicide applications, mowing, and manual removal continue throughout the Park and at Verbena Fields.

7. Outreach and Education

a. Endangered Species Fair – Park rangers and Park Watch volunteers staffed a booth at South 1 Mile for the Endangered Species Fair. Park Safety, wildlife behavior, natural habitats and general park information was presented to over 1000 visitors.

b. Memorial Day Weekend – Park Watch Volunteers staffed an information table at South 1 Mile. Information about responsible park use and good stewardship were the main topics presented.


8. Street Trees and Landscapes

a. Golf Course – Authorized the Bidwell Park Municipal Golf Course to remove a hazard hackberry and complete safety pruning on several native trees.

b. Urban Forest Management Plan – As Council directed staff to develop a contract to complete Urban Forest Manager tasks, we will suspend work on the plan until that contract/person is in place.

c. Projects Completed:

- 44-Service Request- a detailed list is available.
- Down Limbs and Hangers- 50 hours (58 locations).
- Safety Meetings- 3 hour.
- Prep Time and DOT Inspections- 40 hours.
- Equipment Maintenance- 17 hours.
- Traffic Safety Pruning- 36 hours (67 trees pruned).
- Priority Removals- 17 hours (15 dead or dying trees removed).
- Irrigation- 130 hours
- Call Out cleanup- 2 hours.
- Brush Chipping and cleanup- 4 hours.
- Planting- 4 hours.
- Grates and Cages- 6 hours.
- Formative Pruning- 6 hours (12 trees).
- Unauthorized Camp cleanup- 3 hours.
- Storm Damage cleanup- 14 hours.
- Petersen Tree Care- hazard pruning and safety 66.5 hours.

c. Tree Call Outs:

1. There were 7 call outs for the month of May that required follow up clean up and inspections.

d. Tree Permits:

- Pruning- 3 approved
- Removal- 2 approved
- Planting- 1 approved

d. Below this Eastern Sycamore tree at 730 Esplanade was slated for removal as part of the annual pedestrian improvement project (sidewalk repair project). Over the years this large tree has raised up the sidewalk and caused a major trip hazard for anyone passing by. In residential areas like this when the sidewalk is raised up it is generally caused from surface roots. After performing a thorough root collar excavation staff had discovered that the tree had a much more "deep rooting" growth habit with no decay. The reason for the sidewalk lift was from normal trunk expansion that had outgrown its planter space. With this type of root system the sidewalk can be removed and replaced without cutting or causing any damage to the roots. Therefore it is staff recommendations to keep the tree and replace the sidewalk as scheduled. The root collar excavation was done in March 2014. The sidewalk replacement was completed in May 2014. The finished product came out very nice with no damage to tree or roots.

Before: Sycamore causing damage to sidewalk. Staff conducted a root collar investigation to check status of tree and health of root system.

After: The tree was determined to have a healthy root deep roots, the sidewalk was repaired and widened to give a little more room for the tree.




Before and after Arundo removal on Little Chico Creek

9. Volunteer and Donor Program

a. Quarterly Volunteer – The July report will include the first 2 quarters of the year.

b. Upward Bound Work Day – About 240 Upward Bound students and adult volunteers helped out in Bidwell Park on July 20th. Great group!

c. Upcoming Volunteer Opportunities –

i. July 1 (8 to 11 am) Invasive Plant Removal on Little Chico Creek - We'll be removing privet trees from the north side of LCC in the city-owned open space at the intersection of Olive St. and Humboldt Ave. Come any time. Call Susan at 321-3406 for more information. Co-sponsored by the Chico Park Division and the Mount Lassen Chapter of the California Native Plant Society.

ii. July 12 (8 to 11 am) Bidwell Bowl Volunteer Work Session - Remove invasive plants from this area near the east edge of the CSU Chico campus. Meet at Bidwell Bowl Map on the north side of Big Chico Creek near Bidwell Mansion. Co-sponsored by Friends of Bidwell Park and the Chico Park Division. For more information, call Susan at (530) 321-3406.

iii. July 12 (9am - 12pm) - The Stream Team Water Quality Monitoring - (Meet at Five Mile Picnic Area Parking Lot , off Centennial Way).

iv. July 26 (9 am to noon) -- Comanche Creek Greenway Workday - Join community & neighborhood volunteers at the intersection of East Park Ave. and Midway, the eastern boundary of the city-owned Comanche Creek Greenway. Volunteers will remove invasive plants and pick up trash. Wear long pants and closed-toe shoes. Bring work gloves if you have them. For more information, call 966-6861. Sponsored by Friends of Comanche Creek Greenway and the Chico Park Division. Rain cancels.

10. Upcoming Issues/Miscellaneous

a. Ranger Safety– Recent concerns of Ranger safety in the field have prompted the City to explore the carrying of Tasers/Electronic Control Devices (ECD's). State authority (Penal Code sections 830.31(b) and 836.5) allows Rangers to defend themselves and to use reasonable force in the execution of their duties. Staff is working on a Department use policy before the ECDs are issued. The preliminary review suggests that the draft policy is consistent with Chico PD's use policy. The policy may be reviewed by Council before the Department of Public Works adopts it. Staff also seeks input from the BPPC. Rangers participated in Taser training with the Chico PD earlier this year.

MONTHLY SUMMARY TABLES

Table 1. Monthly Public and Private Permits

Date	Location	Organization	Event	Participant #
05/03/2014	Cedar Grove	Chico Running Club	Run	150
05/03/2014	City Plaza	Cyrcle Productions	Artisian Faire	700
05/03/2014	1 Mile	Butte Environmental Council	Endangered Species Faire	3000
05/04/2014	Children's Playground	Nu Alpha Kappa Fraternity, Inc.	Children's Carnival	200
05/04/2014	1 Mile	Kristina Chesterman Memorial Clinic	5K/10K walk/run	150
05/10/2014	1 Mile	Fleet Feet	Diva Dash	1000
05/17/2014	1 Mile	NV Community Foundation	National Buddy Walk	500
05/24/2014	1 Mile	Fishbio	5K Fun Run	200
05/24/2014	1 Mile	The Potter's House	Communitiy Concert	120
05/31/2014	Horseshoe Lake	Hooked on Fishing No On Drugs	Dishing Derby	1000
05/31/2014	1 Mile	Northern CA Regional Land Trust	5k / 10K Run/Walk	350
Totals			**12**	**7370**

Table 2. Monthly Private Permits

Type	# Permits	# Participants
Private	57	3340
Caper Acres	39	842
Totals	**96**	**4182**

Table 3. Monthly Maintenance Hours.

Category	Staff Hours	% of Total	% Change from Last Month	2014 Trend
1. Safety	693	48.1%	307.8%	
2. Infrastructure Maintenance	462	32.1%	338.5%	
3. Vegetation Maintenance	209	14.5%	125.6%	
4. Admin Time/Other	78	5.4%	51.7%	
Monthly Totals	1441	100%	212.6%	

Table 4. Monthly Incidents

Ranger Report Incidents			
5/3/2014	Lower Park	Reckless Vehicle	UTL
5/3/2014	Lindo Channel	Deceased Person	Under Investigation
5/6/2014	City Plaza	Fight	Report Taken
5/7/2014	Lost Park	Warrant	Arrest
5/10/2014	Lower Park	Shots Heard	UTL
5/14/2014	Lower Park	Stolen Vehicle	Recovered
5/19/2014	Lower Park	Drug Possession	Arrest
5/19/2014	Lower Park	Warrant	Arrest
5/21/2014	City Plaza	Fight	NFA
5/25/2014	City Plaza	Brandish Knife	NFA
5/29/2014	Lower Park	Drunk in Public/Resist Park Ranger	Arrest
5/29/2014	Lower Park	Warrant	Arrest

Table 5. Monthly Citations and Warnings

Ranger Report - Warnings 2014

	Monthly			Annual			
Violation - Warnings	Total Warnings	%	Rank	Total Warnings	%	Rank	2014 Trend
Alcohol	90	24%	1	172	18%	2	
Animal Control Violations	60	16%	4	163	17%	3	
Bicycle Violation	71	19%	2	214	22%	1	
Glass	37	10%	5	65	7%	6	
Illegal Camping	14	4%	7	47	5%	8	
Injury/Destruction City Property	1	0%	10	2	0%	11	
Littering	5	1%	8	16	2%	9	
Other Violations	17	5%	6	51	5%	7	
Parking Violations	5	1%	8	74	8%	5	
Resist/Delay Park Ranger	1	0%	10	3	0%	10	
Smoking	69	19%	3	155	16%	4	
Totals	370	100%		962	100%		

Ranger Report - Citations 2014							
	Monthly			Annual			
Violation - Citations	Total Citations	%	Rank	Total Citations	%	Rank	2014 Trend
Alcohol	6	19%	2	21	11%	3	
Animal Control Violations	4	13%	4	24	13%	2	
Bicycle Violation	0	0%	8	1	1%	9	
Glass	1	3%	6	4	2%	8	
Illegal Camping	5	16%	3	20	11%	4	
Injury/Destruction City Property	0	0%	8	5	3%	7	
Littering	1	3%	6	1	1%	9	
Other Violations	0	0%	8	10	5%	5	
Parking Violations	11	35%	1	90	49%	1	
Resist/Delay Park Ranger	0	0%	8	1	1%	9	
Smoking	3	10%	5	6	3%	6	
Totals	31	100%		183	100%		

Attachments:

A. Bidwell Park Pulse, Summer 2014, v

S:\Admin\BPPC\BPPC_Meetings\2010\BPPC_2010_Templates\10_BPPC__meetings\BPPC_Manager_Report_template_10_1029.doc
6/25/2014