

University of California Cooperative Extension Agreement

AGREEMENT TO PROVIDE ASSISTANCE TO OC PARKS

THIS AGREEMENT TO PROVIDE ASSISTANCE TO OC PARKS ("AGREEMENT") is made and entered into this _____ day of _____, 20____ by and between the County of Orange (hereinafter referred to as "COUNTY"), and The Regents of the University of California on behalf of its UC Cooperative Extension, Orange County (hereinafter referred to as "UNIVERSITY"), which are sometimes referred to herein individually as a "PARTY" or collectively as the "PARTIES".

WITNESSETH

WHEREAS, UNIVERSITY conducts an Agricultural Extension Program to bring agricultural education and research information to the public; and

WHEREAS, in 1990, a Memorandum of Understanding was established between UNIVERSITY and COUNTY to provide funding to UNIVERSITY staff assigned to Orange County to plan and conduct research and educational programs for the benefit of COUNTY residents; and

WHEREAS, COUNTY historically has had a beneficial and constructive working relationship with UNIVERSITY in areas related to effectively maintaining landscape vegetation in COUNTY Regional Parks, which are managed by Orange County Parks ("OC PARKS"), a COUNTY department within the COUNTY's OC Community Resources agency; and

WHEREAS, OC PARKS must satisfy State-mandated requirements to reduce water usage for landscape irrigation and to prepare an Integrated Pest Management program; and

WHEREAS, in 2010, OC PARKS entered into an agreement with UNIVERSITY to conduct research on reduction of water usage for landscape irrigation and weed management services; and

WHEREAS, following the successful conclusion of the 2010 agreement, OC PARKS entered into an agreement with UNIVERSITY in 2015 to conduct research, survey, monitoring, and guidelines development related to pest management and management of native tree species;

WHEREAS, UNIVERSITY has unique expertise to assist OC PARKS in these areas; and

WHEREAS, OC PARKS desires to continue to receive UNIVERSITY services and have access to UNIVERSITY expertise, systems, and research capacity/ability not available in the market place.

NOW, THEREFORE, IT IS AGREED by and between COUNTY and UNIVERSITY hereto as follows:

1. AGREEMENT

UNIVERSITY will provide services to the COUNTY upon the terms and conditions hereinafter specified. UNIVERSITY's project manager ("PROJECT MANAGER") who shall be assigned to manage provision of services is Beatriz Nobua-Behrmann. Any change in PROJECT MANAGER must be approved in writing by the Director of OC PARKS (hereinafter referred to as "DIRECTOR").

2. ADMINISTRATION OF AGREEMENT

The DIRECTOR shall administer this AGREEMENT for COUNTY. The DIRECTOR shall assign a staff representative (hereinafter "STAFF REPRESENTATIVE") to coordinate with UNIVERSITY in implementing this AGREEMENT. STAFF REPRESENTATIVE shall provide direction to UNIVERSITY, review UNIVERSITY's work, and assist UNIVERSITY in dealings with other public agencies and private parties which, in the judgment of DIRECTOR, warrant attention.

3. TERM

The term of this AGREEMENT shall be twelve (12) months from the date first written above, renewable for four (4) additional twelve (12) month periods upon mutual agreement of the PARTIES as memorialized in writing thirty (30) days prior to expiration. DIRECTOR may renew this AGREEMENT, based on prior satisfactory performance, provided that such renewal does not result in the total term of this AGREEMENT exceeding sixty (60) months and provided that all terms and conditions remain unchanged.

4. SERVICES TO BE PROVIDED BY UNIVERSITY

A. UNIVERSITY shall provide experts in the areas of landscape maintenance, orchard maintenance, urban forestry, water usage management, pest management and weed management to consult with OC PARKS staff.

B. UNIVERSITY shall develop training programs and conduct training for OC PARKS staff per the specifications in Exhibit "A – G" attached hereto.

C. UNIVERSITY may conduct applied research within COUNTY regional parks and provide educational programs to OC PARKS staff directly related to that research.

D. All work by UNIVERSITY to provide the above services must be approved in advance, in writing, by the STAFF REPRESENTATIVE or DIRECTOR. The approval must include a scope of work and an estimate of the hours and/or cost involved.

E. On a quarterly basis, UNIVERSITY shall provide to COUNTY an accounting of all costs incurred by UNIVERSITY to provide the COUNTY approved services under this AGREEMENT. The accounting shall reflect both the subject quarter and the cumulative year-to-date costs and shall be submitted within forty-five (45) days of the end-of-quarter.

F. UNIVERSITY shall be responsible for submitting all work products to COUNTY in a form which has been thoroughly reviewed for completeness, accuracy and consistency by

UNIVERSITY's PROJECT MANAGER. Any work product not fulfilling this requirement shall be returned to UNIVERSITY for revision prior to acceptance by COUNTY.

5. SERVICES TO BE PROVIDED BY COUNTY

COUNTY shall waive all COUNTY-issued permit fees associated with UNIVERSITY research on COUNTY property. Permit fees shall be waived only when research conducted benefits COUNTY within the scope of this AGREEMENT.

6. UNIVERSITY RELATIONSHIP

UNIVERSITY is and at all times shall be deemed to be an independent contractor, wholly responsible for the services performed under terms of this AGREEMENT. COUNTY shall look only to UNIVERSITY for results. Nothing contained herein shall be construed as creating any relationship of employer/employee, principal/agent, master/servant, partners, joint venture or association. UNIVERSITY shall assume full responsibility for the actions of its employees as related to the services provided under this AGREEMENT.

7. MEETINGS

The STAFF REPRESENTATIVE and PROJECT MANAGER shall meet on a monthly basis to discuss contractual matters or performance and progress under this AGREEMENT.

8. TERMINATION OF AGREEMENT FOR CONVENIENCE

If for any reason COUNTY determines that UNIVERSITY's services, in whole or in part, are no longer required, COUNTY shall notify UNIVERSITY in writing of such termination and UNIVERSITY shall immediately suspend performance of services approved by DIRECTOR (unless the notification directs otherwise). UNIVERSITY shall, within a reasonable period of time not to exceed sixty (60) days, deliver to COUNTY all work performed by UNIVERSITY and/or anyone working under the supervision of UNIVERSITY pursuant to this AGREEMENT theretofore, said work having been reduced to submittals or other work products, prior to payment of any remaining compensation. UNIVERSITY, in executing this AGREEMENT, shall be deemed to have waived any and all claims for damages in the event of COUNTY termination for convenience. Additionally, in the event of termination under this Section, UNIVERSITY shall refund any unexpended funds paid to UNIVERSITY by COUNTY under this AGREEMENT within sixty (60) days of such notice of termination.

9. PAYMENTS TO UNIVERSITY

A. For performance of work hereunder, COUNTY shall pay UNIVERSITY expenses, direct and indirect costs. Direct costs shall mean costs associated with performing the activities provided in the Scope of Work (as described in Exhibits A-G). Indirect costs shall mean overhead costs which shall be 26% modified total direct costs. In no event shall the totality of all costs exceed Three Hundred and Twenty Thousand Dollars (\$320,000) per AGREEMENT period, unless otherwise changed in accordance with "Article 21, Amendments" of this AGREEMENT.

B. A payment of Three Hundred and Twenty Thousand Dollars (\$320,000) shall be made to the UNIVERSITY within sixty (60) days of approval and full execution of this AGREEMENT.

C. If the term of the AGREEMENT is renewed pursuant to Section 3 above, an additional annual payment of Three Hundred and Twenty Thousand Dollars (\$320,000) shall be made for each year that the term is extended to UNIVERSITY, subject to the limitations described in Section 23 below (Limitation of Obligation Due to Non-Appropriation of Funds). Each annual payment for a renewal period of this AGREEMENT shall be made within sixty (60) days of the commencement of the renewal period.

D. OC PARKS may eliminate and/or delay projects based on department need or otherwise not exhaust funding for the AGREEMENT within any given AGREEMENT term in accordance with the terms of Article 8 – Termination of Agreement for Convenience. In the event of any unexpended funds during any year of this AGREEMENT, the unexpended funds shall, at the DIRECTOR's or STAFF REPRESENTATIVE's discretion, be either 1) carried over as a credit to the next year's payment or 2) refunded to COUNTY.

10. PUBLICATION

No copies of materials produced pursuant to this AGREEMENT, including sketches or graphs, and graphic art work, are to be released by UNIVERSITY and/or anyone acting on behalf of UNIVERSITY to any person, partnership, company, corporation, or agency, without prior review by COUNTY, except as necessary for the performance of services. Within two (2) weeks after receipt of proposed publication, COUNTY shall notify UNIVERSITY of any requested changes or additions, such as consistency with program language or acknowledgement of support that they have identified. If UNIVERSITY determines that disclosure of documents described in this section must be disclosed as a matter of law, COUNTY shall be notified as soon as practicable prior to disclosure of these documents. COUNTY and the State of California (but only upon prior written approval of DIRECTOR) shall have a royalty-free, nonexclusive and irrevocable license to publish, copy, translate, or use now and hereafter, all documents, data, films, tapes, and other material delivered under this AGREEMENT, including materials covered by copyright. All press releases referring to COUNTY by name are to be administered only by COUNTY unless otherwise agreed to by both PARTIES.

11. ERRORS AND OMISSIONS

All reports submitted by UNIVERSITY shall be complete and shall be carefully checked by PROJECT MANAGER, prior to submission to COUNTY. UNIVERSITY agrees that COUNTY review is discretionary and UNIVERSITY shall not assume that COUNTY will discover errors and/or omissions. If COUNTY discovers any errors or omissions in reports, the reports will be returned to UNIVERSITY for correction prior to COUNTY accepting UNIVERSITY's report if UNIVERSITY is in agreement with COUNTY's review. Should COUNTY or others discover, after COUNTY acceptance, errors or omissions in reports submitted by UNIVERSITY, said acceptance of reports shall not be used as a defense.

12. SUBCONTRACTOR OF WORK

UNIVERSITY may employ special consultants in the performance of services only if each special consultant and the aggregate money value of its work is submitted to and approved by DIRECTOR prior to employment of said special consultant. No obligation to approve such a substitution in performance of services is implied. UNIVERSITY's employment of special

consultants shall not relieve UNIVERSITY from responsibility for the performance of UNIVERSITY's obligations and duties pursuant to this AGREEMENT. However, all special consultants independently contracting with COUNTY shall be independently liable to COUNTY for the performance of the work pursuant to their agreements, and UNIVERSITY shall have no liability for work by special consultants independently contracting with COUNTY.

13. RECORDS AND AUDIT INSPECTIONS

UNIVERSITY shall keep an accurate record of time expended by UNIVERSITY and/or special consultants employed by UNIVERSITY in the performance of this AGREEMENT. Within ten (10) days of COUNTY's written request, UNIVERSITY shall allow COUNTY or authorized State or Federal agencies or any duly authorized representative to have the right to access, examine, audit, excerpt, copy or transcribe any pertinent transaction, activity, time cards or other records relating to this AGREEMENT. UNIVERSITY shall keep such material, including all pertinent cost accounting, financial records and proprietary data for a period of one (1) year after termination or completion of the AGREEMENT or until resolution of any claim or dispute between the PARTIES, whichever is later. Should UNIVERSITY cease to exist as a legal entity, records pertaining to this AGREEMENT shall be forwarded within a reasonable period of time not to exceed sixty (60) days to its successor in interest or surviving entity in a merger or acquisition, or, in the event of liquidation, to COUNTY.

14. CONFLICT OF INTEREST

UNIVERSITY agrees that no former or current COUNTY employee shall participate in the services provided by UNIVERSITY to COUNTY, or become a partner, shareholder or otherwise share in the profits of UNIVERSITY for a period of six (6) months from the date such person ceased COUNTY employment.

15. NON-EMPLOYMENT OF COUNTY OF ORANGE PERSONNEL

UNIVERSITY agrees that no full-time, regular employee of the COUNTY who is involved with this AGREEMENT shall be given or offered employment by UNIVERSITY in a moonlighting status during the life of this AGREEMENT regardless of the assignments said employee may be given or the days or hours employee may work. By accepting this AGREEMENT, UNIVERSITY agrees not to knowingly offer employment to any COUNTY full time regular employee employed by COUNTY who is involved in professional classifications of the same skills required for the performance of this AGREEMENT.

16. NONDISCRIMINATION

In the performance of the terms of this AGREEMENT, UNIVERSITY shall not engage in discrimination in the employment of persons because of race, creed, color, religion, national origin, age, physical handicap, marital status or sex. Violation of this provision may result in the imposition of penalties referred to in Labor Code Section 1735 or other applicable State and Federal regulation.

17. LAWS TO BE OBSERVED

UNIVERSITY is assumed to be familiar with and, at all times, shall observe and comply with all federal, state and local laws, ordinances, rules and regulations in any manner affecting the conduct of services under this AGREEMENT.

18. INDEMNIFICATION AND GENERAL LIABILITY

UNIVERSITY shall defend, indemnify and hold COUNTY harmless from and against any and all liability, loss, expense, attorney's fees, or claims for injury or damages arising out of UNIVERSITY's performance of this AGREEMENT but only in proportion to and to the extent such liability, loss, expense, attorney's fees or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of UNIVERSITY, its officers, agents, or employees.

COUNTY shall defend, indemnify and hold UNIVERSITY harmless from and against any and all liability, loss, expense, attorney's fees, or claims for injury or damages arising out of the COUNTY's performance of this AGREEMENT but only in proportion to and to the extent such liability, loss, expense, attorney's fees or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of COUNTY, its officers, agents or employees.

19. INSURANCE PROVISIONS

Prior to the provision of services under this AGREEMENT, the UNIVERSITY agrees to purchase all required insurance at UNIVERSITY's expense, or maintain a program of self-insurance, including all endorsements required herein, necessary to satisfy the COUNTY that the insurance provisions of this AGREEMENT have been complied with. UNIVERSITY agrees to keep such insurance coverage, Certificates of Insurance, and endorsements on deposit with the COUNTY during the entire term of this AGREEMENT. In addition, all subcontractors performing work on behalf of UNIVERSITY pursuant to this AGREEMENT shall obtain insurance subject to the same terms and conditions as set forth herein for UNIVERSITY.

UNIVERSITY shall ensure that all subcontractors performing work on behalf of UNIVERSITY pursuant to this AGREEMENT shall be covered under UNIVERSITY's insurance as an Additional Insured or maintain insurance subject to the same terms and conditions as set forth herein for UNIVERSITY. UNIVERSITY shall not allow subcontractors to work if subcontractors have less than the level of coverage required by COUNTY from UNIVERSITY under this AGREEMENT. It is the obligation of UNIVERSITY to provide notice of the insurance requirements to every subcontractor and to receive proof of insurance prior to allowing any subcontractor to begin work. Such proof of insurance must be maintained by UNIVERSITY through the entirety of this AGREEMENT for inspection by COUNTY representative(s) at any reasonable time.

All self-insured retentions (SIRs) shall be clearly stated on the Certificate of Insurance.

If the UNIVERSITY fails to maintain insurance acceptable to the COUNTY for the full term of this AGREEMENT, the COUNTY may terminate this AGREEMENT.

The program of self-insurance maintained by the UNIVERSITY shall provide the minimum limits and coverage as set forth below:

Coverage

Minimum Limits

Commercial General Liability	\$1,000,000 per occurrence \$2,000,000 aggregate
Automobile Liability including coverage for owned, non-owned and hired vehicles	\$1,000,000 per occurrence
Workers Compensation	Statutory
Employers Liability Insurance	\$1,000,000 per occurrence

The Certificate of Self-Insurance shall name the ***COUNTY of Orange its elected and appointed officials, officers, agents and employees as an Indemnified Party.***

Insurance certificates should be forwarded to the agency/department address listed on the solicitation. Insurance certificates should be forwarded to the agency/department address listed on the solicitation.

If the UNIVERSITY fails to provide the insurance certificate within seven (7) days of notification by CEO/Purchasing or the agency/department purchasing division, award may be made to the next qualified vendor.

COUNTY expressly retains the right to require UNIVERSITY to increase or decrease insurance of any of the above insurance types throughout the term of this AGREEMENT. Any increase or decrease in insurance will be as deemed by COUNTY Risk Manager as appropriate to adequately protect COUNTY.

COUNTY shall notify UNIVERSITY in writing of changes in the insurance requirements. If UNIVERSITY does not deposit copies of acceptable Certificates of Insurance and endorsements with COUNTY incorporating such changes within thirty (30) days of receipt of such notice, this AGREEMENT may be in breach without further notice to UNIVERSITY, and COUNTY shall be entitled to all legal remedies.

The procuring of such required policy or policies of insurance shall not be construed to limit UNIVERSITY's liability hereunder nor to fulfill the indemnification provisions and requirements of this AGREEMENT, nor act in any way to reduce the policy coverage and limits available from the insurer.

20. NOTICES

Notices and correspondence in connection with this AGREEMENT shall be addressed as set forth below or as either PARTY may hereinafter designate by written notice to the other.

COUNTY

County of Orange
OC Community Resources/OC Parks

Attention: IPM Manager
13042 Old Myford Road
Irvine, CA 92602

UNIVERSITY

University of California
Agriculture and Natural Resources Cooperative Extension
Attention: Beatriz Nobua-Behrmann,
Urban Forestry and Natural Resources Advisor
7601 Irvine Boulevard
Irvine, CA 92618

and

University of California
Agriculture and Natural Resources
Office of Contracts & Grants
Attention: Kimberly Lamar, Associate Director
ANR Office of Contracts & Grants
2801 Second Street
Davis, CA 95618-7774
ocg@ucanr.edu

21. AMENDMENTS

No alteration or variation of the terms of this AGREEMENT shall be valid unless made in writing and signed by the PARTIES hereto, and no oral understanding or agreement not incorporated herein shall be binding on any of the PARTIES hereto.

22. CONSENT TO BREACH NOT WAIVER

No term or provision of this AGREEMENT shall be deemed waived and no breach excused, unless such waiver of consent shall be in writing, signed by the PARTY claimed to have waived or consented. Any consent by any PARTY to, or waiver of, a breach by the other, whether express or implied, shall not constitute a waiver of any other breach of the provision or any other provision of this AGREEMENT. Failure of either PARTY to enforce any provision of this AGREEMENT at any time shall not be construed as a waiver of that provision.

23. LIMITATION OF OBLIGATION DUE TO NON-APPROPRIATION OF FUNDS

The obligation of the COUNTY herein is subject to the availability of funds appropriated for this purpose and nothing contained herein shall be construed as obligating the COUNTY to expend or as involving the COUNTY in any contract or obligation for the future payment of money in excess of appropriations authorized by law. In the event this AGREEMENT extends into succeeding fiscal year periods and the Board of Supervisors does not allocate sufficient funds for the next succeeding fiscal year's payments, this AGREEMENT shall be terminated as of June 30 of the then-current fiscal year. COUNTY shall notify UNIVERSITY in writing of such non-allocation at the earliest possible date.

24. ENTIRETY

This AGREEMENT is the entire AGREEMENT between the PARTIES with respect to the matters herein and there are no restrictions, promises, warranties or undertakings other than those set forth or referred to herein.

25. SEVERABILITY

If any part of this AGREEMENT is held, determined or adjudicated to be illegal, void or unenforceable by a court of competent jurisdiction, the remainder of this AGREEMENT shall be given effect to the fullest extent reasonably possible.

26. GOVERNING LAW AND VENUE

This AGREEMENT has been negotiated and executed in the State of California and shall be governed by and construed under the laws of the State of California. In the event of any legal action to enforce or interpret this AGREEMENT, the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California. The PARTIES hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure Section 394. The PARTIES specifically agree that by soliciting and entering into and performing services under this AGREEMENT, the UNIVERSITY shall be deemed to constitute doing business within Orange County from the time of solicitation of work, through the period when all work under this AGREEMENT is completed, and continuing until the expiration of any applicable limitations period. Furthermore, the PARTIES have specifically agreed, as part of the consideration given and received for entering into this AGREEMENT, to waive any and all rights to request that an action be transferred for trial to another county under Code of Civil Procedure Section 394.

27. AUTHORITY

The PARTIES to this AGREEMENT represent and warrant that this AGREEMENT has been duly authorized and executed and constitutes the legally binding obligation of their respective organization or entity, enforceable in accordance with its terms.

28. CALENDAR DAYS

Any reference to the word "day" or "days" herein shall mean calendar day or calendar days, respectively, unless otherwise expressly provided.

29. ATTORNEY'S FEES

In any action or proceeding brought to enforce or interpret any provision of this AGREEMENT, or where any provision hereof is validly asserted as a defense, each PARTY shall bear its own attorney's fees and costs.

30. INTERPRETATION

This AGREEMENT has been negotiated at arm's length and between persons sophisticated and knowledgeable in the matters dealt with in this AGREEMENT. In addition, each PARTY has been represented by experienced knowledgeable independent legal counsel of their own choosing, or has knowingly declined to seek such counsel despite having the opportunity to do so. Each PARTY further acknowledges that they have not been influenced to any extent whatsoever in executing this AGREEMENT by any other PARTY hereto or by any

person representing them, or both. Accordingly, any rule of law (including California Civil Code Section 1654) or legal decision that would require interpretation of any ambiguities in this AGREEMENT against the PARTY that has drafted it is not applicable and is waived. The provisions of this AGREEMENT shall be interpreted in a reasonable manner to affect the purpose of the PARTIES and this AGREEMENT.

31. HEADINGS

The headings in this AGREEMENT are for convenience of reference only and shall not limit or otherwise affect the meaning thereof.

Remainder of page intentionally left blank

IN WITNESS WHEREOF, the PARTIES hereto have executed this AGREEMENT on the dates opposite their respective signatures:

COUNTY OF ORANGE

Date: _____

Chairwoman, Board of Supervisors

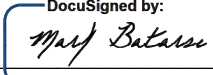
Signed and certified that a copy of this document has been delivered to the Chair of the Board per G.C. Sec. 25103, Reso 79-1535

Attest:

Date: _____

Clerk of the Board of Supervisors
County of Orange, California

APPROVED AS TO FORM:
COUNTY COUNSEL

By: 

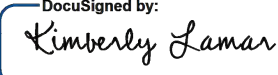
Deputy
7/9/2020

Date: _____

7/9/2020
Date: _____
Kimberly Lamar

By: _____

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

By: 

Associate Director, Office of Contracts & Grants

Exhibit A

Invasive Shot Hole Borer Management

Principal Investigator

Beatriz Nobua-Behrmann, Ph.D., OC UC Cooperative Extension

Potential Collaborators

Akif Eskalen, Ph.D., Dept. of Plant Pathology, UC Riverside

Tim Paine, Ph.D., Dept. of Entomology, UC Riverside

Stacy Hishinuma, Ph.D., USDA Forest Service, Forest Health Protection

Andrea Hefty, Ph.D., USDA Forest Service, Forest Health Protection

Cheryl Wilen, Ph.D., UC IPM Advisor

Project Duration and Budget

Year 1: August 1, 2020 to July 31, 2021

Estimated Budget: \$13,500

Year 2: August 1, 2021 to July 31, 2022

Estimated Budget: \$13,500

Year 3: August 1, 2022 to July 31, 2023

Estimated Budget: \$3,500

Year 4: August 1, 2023 to July 31, 2024

Estimated Budget: \$3,500

Year 5: August 1, 2024 to July 31, 2025

Estimated Budget: \$3,500

Estimated 5 Year Total: \$37,500

OC Parks may reallocate budget from this or other projects based on department need.

- a. **ISHB Management Guidance-** UNIVERSITY shall provide counsel as new updates and changes are made to ISHB management guidelines and best management practices.
- b. **ISHB Training-** UNIVERSITY shall be available for informal and formal ISHB related help, training, and status debriefing on the current ISHB situation at the request of OC Parks.
- c. **ISHB Wildlands Management Guidelines -** UNIVERSITY shall develop a plan for how to best monitor, trap, and respond to ISHB in wildland spaces. This plan will consider endemic/reproductive ISHB host spp. to OC Parks wildlands, typical access limitations, and pesticide restrictions in sensitive habitats, etc.

Exhibit B

Invasive Shot Hole Borer Monitoring

Principal Investigator

Beatriz Nobua-Behrmann, Ph.D., OC UC Cooperative Extension

Potential Collaborators

Akif Eskalen, Ph.D., Dept. of Plant Pathology, UC Riverside

Tim Paine, Ph.D., Dept. of Entomology, UC Riverside

Stacy Hishinuma, Ph.D., USDA Forest Service, Forest Health Protection

Andrea Hefty, Ph.D., USDA Forest Service, Forest Health Protection

Cheryl Wilen, Ph.D., UC IPM Advisor

Project Duration and Budget

Year 1: August 1, 2020 to July 31, 2021

Estimated Budget: \$198,100

Year 2: August 1, 2021 to July 31, 2022

Estimated Budget: \$198,100

Year 3: August 1, 2022 to July 31, 2023

Estimated Budget: \$214,550

Year 4: August 1, 2023 to July 31, 2024

Estimated Budget: \$214,550

Year 5: August 1, 2024 to July 31, 2025

Estimated Budget: \$214,550

Estimated 5 Year Total: \$1,039,850

OC Parks may reallocate budget from this or other projects based on department need.

- a. **Monitoring Program-high priority areas** - UNIVERSITY shall visually survey OC Parks inventoried trees in all regional parks for ISHB. Surveying will be limited to known reproductive host trees. Specific locations may be emphasized or omitted based on OC Park staff direction. Surveying will take place 1X per year January-March. Data will be directly recorded at the time of surveying into OC Parks tree management software. Data attributes will include: ISHB infestation level, location of infestation in the tree, observation of dieback, tree health rating, and any other pertinent descriptors as recommended. Individual park survey reports/maps are due 2 weeks after completion of said park or surveyed area.

- b. **Monitoring Program-additional areas/wildlands**- UNIVERSITY shall use current high-resolution imagery, drone, and/or other non-vantage point reconnaissance techniques to efficiently survey OC Parks wildland open space trees for ISHB infestations. Surveying will be limited to known reproductive host trees in specific

locations identified by OC Parks staff. Follow up ground surveys will be required for areas of interest based on initial survey results. Surveying will take place 1X per year starting in April. Data will be directly recorded at the time of surveying into OC Parks tree management software. Data attributes will include: tree spp., location, ISHB infestation level, location of infestation in the tree, observation of dieback, tree health rating, and any other pertinent descriptors as recommended. Individual wildland survey reports/maps are due 2 weeks after completion of said park or surveyed area.

- c. **Trapping Program** – UNIVERSITY shall monitor existing Lindgren funnel and sticky traps in an ongoing effort to record level of infestation trends. This will include both turf parks and wildland areas. Traps will be inspected at a frequency prescribed by UNIVERSITY from February-November. Trapping protocol will follow OC Parks/UNIVERSITY joint guidelines. Traps may be added, relocated, or removed based on monitoring results, UNIVERSITY's recommendation, or at OC Parks staff direction. Completed trapping reports/maps shall be provided in the required quarterly and annual reports (see Exhibit G-AGREEMENT Reporting Requirements)
- d. **Localized Responsive Treatment Program** – During field surveys, UNIVERSITY shall spot treat individual tree(s) with localized ISHB attacks in high priority areas identified by OC Parks staff. Spot treatments will be limited to known reproductive host trees with no more than 10 new entry holes, limited to the height an applicator can safely reach with two feet on the ground. The localized injection treatment shall be non-invasive (no drilling) and apply the appropriate amount of material recommended to control the localized attack. The ISHB spot treatment program will be adaptive and adjusted as necessary based on results and recommendations from UNIVERSITY and/or OC Parks staff.
- e. **Reporting-** UNIVERSITY shall provide individual ISHB park/wildland survey reports/maps 2 weeks after surveying completion of said park or wildland area. UNIVERSITY shall provide OC Parks system wide ISHB status updates in the required quarterly and annual reports (see Exhibit G-AGREEMENT Reporting Requirements)

Exhibit C

Gold Spotted Oak Borer Management

Principal Investigator

Beatriz Nobua-Behrmann, Ph.D., OC UC Cooperative Extension

Potential Collaborators

Tim Paine, Ph.D., Dept. of Entomology, UC Riverside

Stacy Hishinuma, Ph.D., USDA Forest Service, Forest Health Protection

Andrea Hefty, Ph.D., USDA Forest Service, Forest Health Protection

Cheryl Wilen, Ph.D., UC IPM Advisor

Project Duration and Budget

Year 1: August 1, 2020 to July 31, 2021

Estimated Budget: \$13,500

Year 2: August 1, 2021 to July 31, 2022

Estimated Budget: \$13,500

Year 3: August 1, 2022 to July 31, 2023

Estimated Budget: \$3,500

Year 4: August 1, 2023 to July 31, 2024

Estimated Budget: \$3,500

Year 5: August 1, 2024 to July 31, 2025

Estimated Budget: \$3,500

Estimated 5 Year Total: \$37,500

OC Parks may reallocate budget from this or other projects based on department need.

- a. **GSOB Management Guidance** – UNIVERSITY shall provide counsel as new updates and changes are made to GSOB management guidelines and best management practices. UNIVERSITY shall be available to interpret and provide management guidance on GSOB related data collected by OC Parks staff and/or its Contractors.
- b. **GSOB Training**- UNIVERSITY shall be available for informal and formal GSOB related help, training, and status debriefing on the current GSOB situation at the request of OC Parks.
- c. **GSOB Wildlands Management Guidelines** - UNIVERSITY shall develop a plan for how to best monitor, trap, and respond to GSOB in wildland spaces. This plan will take into consideration endemic/reproductive GSOB host spp. in OC Parks wildlands, typical access limitations, and pesticide restrictions in sensitive habitats, etc. In conjunction, UNIVERSITY shall provide a GSOB management plan summarizing the specific recommendations for GSOB management in wildland spaces.

Exhibit D

Gold Spotted Oak Borer Monitoring

Principal Investigator

Beatriz Nobua-Behrmann, Ph.D., OC UC Cooperative Extension

Potential Collaborators

Tim Paine, Ph.D., Dept. of Entomology, UC Riverside

Stacy Hishinuma, Ph.D., USDA Forest Service, Forest Health Protection

Andrea Hefty, Ph.D., USDA Forest Service, Forest Health Protection

Cheryl Wilen, Ph.D., UC IPM Advisor

Project Duration and Budget

Year 1: August 1, 2020 to July 31, 2021

Estimated Budget: \$84,900

Year 2: August 1, 2021 to July 31, 2022

Estimated Budget: \$84,900

Year 3: August 1, 2022 to July 31, 2023

Estimated Budget: \$91,950

Year 4: August 1, 2023 to July 31, 2024

Estimated Budget: \$91,950

Year 5: August 1, 2024 to July 31, 2025

Estimated Budget: \$91,950

Estimated 5 Year Total: \$445,650

OC Parks may reallocate budget from this or other projects based on department need.

- a. **Monitoring Program-** UNIVERSITY shall use current high-resolution imagery, drone, and/or other non-vantage point reconnaissance techniques to efficiently survey OC Parks wildland open space and regional park trees for GSOB infestations. Specific locations such as known GSOB infestations, campgrounds, and other critical areas will be prioritized with additional guidance provided by OC Parks staff as needed. Follow up ground surveys will be required for prioritized areas and areas of interest based on the non-vantage point surveying results. Surveying of these specific sites will be completed at a minimum 1X per year October-January. Additional sites may be surveyed throughout the year as directed by OC Parks or recommended by UNIVERSITY. Data will be directly recorded at the time of surveying into OC Parks tree management software. Data attributes will include: tree spp., location, GSOB infestation level, observation of dieback, tree health rating, and any other pertinent descriptors as recommended. Individual survey reports/maps are due 2 weeks after completion of area surveyed.
- b. **Localized Responsive Treatment Program** – During field surveys, if GSOB is identified in a previously un-infested area, UNIVERSITY and/or its Contractor shall treat

the individual tree(s) with a systemic basal spray and bark penetrant or like treatment based on current best practices for GSOB management and in collaboration with OC Parks staff. Treatments will be at OC Parks discretion and limited to 1X per year for each identified tree.

- c. **Trapping Program** – UNIVERSITY shall investigate and provide guidance on the viability of establishing a trapping program for GSOB to help in early GSOB detection. If recommended, traps will be inspected at a frequency prescribed by UNIVERSITY from May-September. Trapping protocol will follow most current guidelines based on prevalent research. Traps may be added, relocated, or removed based on monitoring results, UNIVERSITY's recommendation, or at OC Parks staff direction. Completed trapping reports/maps shall be provided in the required quarterly and annual reports (see Exhibit G-AGREEMENT Reporting Requirements)

- d. **Reporting**- UNIVERSITY shall provide individual GSOB park/wildland survey reports/maps 2 weeks after surveying completion of said park or wildland area. UNIVERSITY shall provide OC Parks system wide GSOB status updates in the required quarterly and annual reports (see Exhibit G-AGREEMENT Reporting Requirements)

Exhibit E

Yellowjacket Project

Principal Investigator

Beatriz Nobua-Behrmann, Ph.D., OC UC Cooperative Extension

Potential Collaborators

Michael Rust Ph.D., UC Riverside

Dong-Hwan Chow Ph.D., UC Riverside

Erin Wilson Ph.D., UC Riverside

Project Duration and Budget

Year 1: August 1, 2020 to July 31, 2021

Estimated Budget: \$10,000

Year 2: August 1, 2021 to July 31, 2022

Estimated Budget: \$10,000

Year 3: August 1, 2022 to July 31, 2023

Estimated Budget: \$6,500

Year 4: August 1, 2023 to July 31, 2024

Estimated Budget: \$6,500

Year 5: August 1, 2024 to July 31, 2025

Estimated Budget: \$6,500

Estimated 5 Year Total: \$39,500

OC Parks may reallocate budget from this or other projects based on department need.

- a. **Yellowjacket Management Guidelines** - UNIVERSITY shall develop yellowjacket outreach and training material for OC Parks use based on the yellowjacket trapping/monitoring/baiting program. Outreach materials will be available for park visitors as well as OC Parks staff. A final write-up on yellowjacket control shall be provided to incorporate in OC Parks' IPM Manual.
- b. **Yellowjacket trapping/monitoring** – UNIVERSITY shall complete yellowjacket monitoring based on current best practices as determined by UNIVERSITY and OC Parks. Monitoring is used to determine population locations, numbers of flying yellowjackets, and when populations reach a set threshold for treatment. Yellowjacket populations begin peaking at different times each year depending on the weather. This correlation between daily upper and lower air temperature and yellowjacket reproductive capacity emphasizes the importance of using monitoring trap population counts to schedule treatments due to the correlation between daily upper and lower air temperature and yellowjacket reproductive capacity. Monitoring traps are installed around park perimeters as well as near picnic/eating areas. If needed, OC Parks will direct

UNIVERSITY to expand or reduce the number of parks engaged in the yellowjacket trapping/monitoring project.

- c. **Yellowjacket baiting** – When monitoring reveals populations reach an established action threshold, yellowjacket bait stations will be deployed. Monitor post-treatment yellowjacket populations and analyze efficacy of bait treatments.
- d. **Reporting**- UNIVERSITY shall provide OC Parks system wide Yellowjacket status updates in the required quarterly and annual reports (see Exhibit G-AGREEMENT Reporting Requirements)

Exhibit F

Optional Projects and Services

As requested by OC Parks, UNIVERSITY involvement in the following activities and any other additional projects and services may require modification to scopes of work and budgets of existing projects. These and other optional projects and services must be mutually agreed upon by OC Parks and UNIVERSITY.

Glyphosate Alternative Trials

- a. **Alternatives to Glyphosate trials and report**– UNIVERSITY shall aggregate into one comprehensive report prior UNIVERSITY glyphosate replacement trials. UNIVERSITY shall conduct additional replacement trials with untested and newly introduced products/methods as identified by UNIVERSITY and/or OC Parks in order to create a report with comparable metrics. The report will highlight alternatives: efficacy, hazard, risk, application rates, application frequency, total application costs (material+ labor), etc. This report will serve as a grade book on alternatives to glyphosate and will be updated as needed to include new product innovations as they become available and tested within the same parameters.

Rodent Control Plan

- a. **Rodent control monitoring** – develop a monitoring program for rodents at an OC Regional Park test site and record baseline levels for current rodent populations and grade the effectiveness of current rodent control practices being performed. Develop a report with recommended best management practices for OC Parks to implement and add to the IPM plan for rodent control following the guidelines of OC Parks current IPM policy.
- b. **Trial new rodent control products** – rodent control product trials will emphasize less toxic control measures. Identify a test site with OC Parks coordination and develop a rating system to grade alternative products: efficacy, hazard, risk, application rates, application frequency, total application costs (material+ labor), and other important details.

Park Facilities IPM Audit

- a. **IPM site evaluation** – UNIVERSITY shall coordinate with OC Parks one annual site inspection for each of the four unique facility types located within OC Parks. Facility types include: Regional (turf) parks, Wilderness parks, Coastal parks, and Historic

buildings. The four audits will be guided by UNIVERSITY's expertise in IPM as well as an understanding of OC Parks current IPM policy.

- b. **Site findings and recommendations** – after completing four site visits, UNIVERSITY will present a scorecard on each facility's current IPM practices. A report shall be provided to present observations and recommendations.

OC Parks IPM Policy Updating

Project Budget

Estimated budget: \$9,500

- a. **IPM updating** - UNIVERSITY shall evaluate OC Parks current IPM plan and update to reflect OC Parks current IPM policy as well as adjust to current trends and new best management practices in IPM.

Structural IPM Plan

- a. **Structural Plan Development** - UNIVERSITY shall develop a structural IPM plan that protects OC Park's structural assets as well as aligns with OC Parks IPM policy. The structural plan may include: common pests to be encountered, recommended monitoring schedules, monitoring strategies, management controls, etc.

Exhibit G

AGREEMENT Reporting Requirements

Reporting requirements in Exhibit G for all projects held within the AGREEMENT will be in addition to any individual park/wildland survey reports required in their respective Exhibits.

Required Reporting

- a. **Quarterly**-a status report encompassing all projects and related activities in the most recent quarter.
- b. **Annual**-a comprehensive report summarizing all work completed within each project for the year with detailed findings, trends, results, and recommendations, etc.