

Species and Habitat Recovery Grant Application

Grant Application Form and required supplementary materials (hereafter referred to as “application”) cannot exceed 12 pages.

Applicant Name¹: Linh Anh Cat, Ph.D. _____

Address: 1800 Cabrillo Memorial Dr, San Diego, CA 92106 _____

Phone: (619) 523-4290 _____

Email: LinhAnh_Cat@nps.gov _____

Name of Property: Cabrillo National Monument _____

General Location²: 1800 Cabrillo Memorial Dr, San Diego, CA 92106 _____

Jurisdiction³: San Diego _____

Total Acres: 160 _____

Estimated Acres Requiring Management: 160 _____

Owner(s) of Property:⁴ National Park Service _____

Land manager(s) of property (include name[s]): Linh Anh Cat, Program Manager for Resources Management & Science; Andrea Compton, Superintendent _____

Brief project summary that includes your primary goal and objectives. (200-word maximum)

Cabrillo National Monument (CNM) is identified as a Biological Core Area on the Multiple Species Conservation Plan. The National Park Service (NPS) manages CNM, which is 160 acres of habitat ranked as high to very high value in the MSCP. The park is habitat for numerous high-priority Management Strategic Plan (MSP) species, including the orange-throated whiptail, *Aspidoscelis hyperythrus*, which is threatened by Sonoran whiptail invasion moving south from Orange County, and Blainsville’s horned lizard, *Phrynosoma blainvillii*, which is currently locally extinct from the park; we believe previous threats have been removed.

Proposed management actions are to 1) develop an early detection-rapid response (EDRR) program to protect orange-throated whiptail populations from decline if Sonoran whiptails are detected, 2) manage the Argentine ant invasion, which displaces native ants, the food source of Blainsville’s horned lizard, 3) re-introduce Blainsville’s horned lizard once we have confirmed the threat from Argentine ants is reduced, and 4) monitor the herpetofauna community and understand how environmental factors impact populations, including integrating data from a new fog monitoring system (the first of its kind in San Diego County). The proposed project is in Management Unit 1 (see map) and has never received EMP funds.

¹ While collaboration is encouraged in the development of the grant application, the application must identify one organization as the lead entity that will enter into an Agreement with SANDAG.

² Physical address, or closest cross streets or property boundary.

³ Name of city where the project is located. County of San Diego can be listed for the unincorporated areas of the region.

⁴ If the applicant is not the landowner, please submit a letter or right-of-entry permit from the landowner granting permission to perform the land management duties as outlined in the application. Failure to provide the letter or right-of-entry permit will lead to disqualification of the application. (Attached letter or right-of-entry permit (if applicable) does not count towards 12-page maximum.)

Quantify expected results (add bullets as necessary)

- Design and implement an EDRR protocol for invasive Sonoran whiptails
- Map Argentine ant presence and identify possible eradication or treatment fronts
- Reintroduce Blainville's horned lizards to the Point Loma peninsula and monitor their success
- Continue long-term herpetofauna community monitoring, and integrating new fog/climate monitoring data into park management

Brief description of dedicated staff and/or consultants/contractors that would work on the Project. (200-word maximum)

Two existing, dedicated staff will provide in-kind support from the CNM Resources Management & Science division. The program manager will provide 10 weeks of in-kind support each year in supervising multiple staff assigned to the project, assisting with training, fieldwork, and administrative duties (including completing the quarterly and final reports and budget management). The park's marine biologist runs data science for the division and will perform data analysis of existing datasets, such as the long-term herpetofauna monitoring dataset, which she has worked with before. Finally, the EMP Grant will fund a new full-time wildlife biologist to be the project leader, which will include working on data collection for long-term monitoring, obtaining horned lizards to reintroduce, creating an EDRR protocol for Sonoran whiptails, creating biosecurity protocols for invasive plants & animals of concern to whiptails and horned lizards, and responsible for data management, reporting, and communicating results to park management. The wildlife biologist, hired through EMP funds, will compile and transfer data from the project to SANDAG. The park will use our existing database formats. Together, the program manager (in-kind), marine biologist/data scientist (in-kind), and new wildlife biologist will complete the proposed objectives.

Funding Needs Summary

Please indicate how much funding is being requested from SANDAG and any matching funding proposed.

Budget Item	Requested Funding Amount	Description
Personnel Expenses Staff	\$300,000	Includes staff time for non-administrative work on the project
Personnel Administrative Expenses	\$0	Includes all staff time to administer the contract
Consultant/Contractor Expenses	\$0	Includes all costs for consultant/contractor services
Other Direct Expenses	\$20,000	Includes all equipment, supplies, mileage, etc.
Totals	\$320,000	

**if applicable*

Are there matching fund available? Yes No

If yes, how are the matching funds assured? (100-word maximum)

Attach a letter from the organization/partner that ONLY provides confirmation that they are committed to providing the matching funds proposed for this project. Letters confirming matching funds will not count toward the 12-page limit. (General letters of support not related to commitment of matching funds will NOT be accepted and will NOT be considered as part of the application).

Matching NPS funds were awarded in recent grant cycles. Invasive Argentine ant survey funding is secured through the NPS Natural Resource Inventory program, supporting Dr. David Holway (University of California, San Diego) for two years (\$45,789.75). Funding to deploy a new fog monitoring system is secured through the NPS Pacific West Regional Office (\$10,000) and two Scientists In Parks program interns in summer 2022 (\$20,000). The Latino Heritage Internship Program funded initial analyses of herpetofauna data in 2021 (\$10,000). Finally, in-kind staff time from the program manager and marine biologist/data scientist for 10 weeks each year total ~\$155,000. All funds are guaranteed.

Project Application

The application will include: (a) the purpose of the project; (b) the scope of work by tasks; (c) the proposed budget, including matching funds, by task; and (d) a schedule for each task. Applicants must clearly identify their proposed tasks in the scope of work, funding requested for each task (please identify staff hours and cost separately from consultant/contractor costs), start and end dates of the tasks, and deliverables. *Applicants are encouraged to identify phasing and prioritization of tasks in their application in case full funding for the project is not available.*

Project Purpose

Address the following in the application:

1. Describe the proposed management activity(ies) and how it relates to the Management Strategic Plan (MSP) for Conserved Lands in Western San Diego County. Is there current management occurring or has past management occurred on the property (please describe)? If the proposed management activity is based on the results from past field inspections of the species occurrence, describe the conditions and management needs identified and whether or not the data has been provided to the San Diego Management and Monitoring Program. If implementing fire management actions, describe the management technique being used and whether a fire plan currently exists.
2. Which MSP species and their habitats will benefit from the proposed management activity? Which specific MSP objective(s) and action(s) will be implemented? Name the specific MSP species occurrence(s) to benefit from the management activity, if applicable.
3. To be eligible for funding, the proposed project must be within the MSP area. In which Management Unit is the project located? (*Attach a map*)
4. Describe the stressors and/or threats to the MSP species and their habitats in the project area that will be addressed through implementation of this project application.
5. Describe the management techniques proposed, including whether they have been previously used successfully and where. Are there any negative effects to MSP and other sensitive species and their habitats that could result from the proposed management action?
6. What strategic approach will be used to ensure the successful, long-term outcome of the proposed project (e.g. upstream exotic removal prior to downstream, future on-going maintenance)? Which adjacent conserved lands will not be included and why?
7. What are the goals and objectives for the proposed project? What criteria/metrics will be used to measure success? If applicable, what quantitative monitoring data will be collected to evaluate success? Who will be collecting the monitoring data and what are their qualifications?
8. How will the applicant manage the data collected? What software will be used to house the data? Who will be responsible for compiling and transferring the data to SANDAG? Who will be preparing the required quarterly, final, and all other reports?
9. Has the proposed project received *TransNet* Environmental Mitigation Program (EMP) funds previously? If so, what was accomplished with the funds and why are additional funds being requested?
10. Is the proposed activity being done on land that was previously set aside as mitigation? If yes, please elaborate.
11. Does the proposed project provide a co-benefit to CBO Network Communities and foster social equity? Please describe. *Additional Points can be awarded if this is relevant to the project and is appropriately described to meet the qualifications listed in the call for projects.*

Scope of Work by Task

Please break down the application into discrete tasks and include a task name, description of each task, quantifiable expected results, and discrete deliverables for each task.

Note: make sure to list tasks for quarterly reporting on the status of the grant project and a final report on the outcome of the grant project. You may add or subtract rows as needed.

Exhibit A – Proposed Project Scope of Work

Task No.	Task Name	Task Description	Quantifiable Results/Deliverables
1.	Create EDRR program for whiptails	Develop EDRR program for invasive Sonoran whiptails to protect orange-throated whiptails	Deliverables: EDRR protocol for invasive Sonoran whiptails
2.	Manage Argentine ant invasion	Manage Argentine ant invasion and the native ant community	Quantifiable Results: map of Argentine ant presence, possible eradication or treatment fronts identified
3.	Re-introduce horned lizard	Re-introduce Blainsville's horned lizard to the Point Loma peninsula	Quantifiable Results: Blainsville's horned lizard return to the Point Loma peninsula and survive monitoring period Deliverable: published report through NPS that is available to the public
4.	Monitor herpetofauna & environmental conditions	Monitor herpetofauna community and compare with environmental factors	Quantifiable Results: data collected monthly over four years Deliverables: annual reports through NPS that are available to the public
5.	Administrative & data science	Complete SANDAG grant requirements, analyze, manage, and visualize data	Deliverables: quarterly and annual reports to SANDAG, databases copied to SANDAG from NPS

Task 1. Develop EDRR program for invasive Sonoran whiptails to protect orange-throated whiptails

Invasive Sonoran whiptails can rapidly displace orange-throated whiptails (VG species) through asexual reproduction. Both species look very similar, therefore, a new EDRR protocol needs to be developed and tested for park needs and capability. Addresses MSP objective for invasive animals (MGT-PRP-[IAPL](#) INVANI-1, invasive animal management plan) and MSP objective for human uses of preserves (MGT-IMP-[BMP](#) HUMUSE-3, implement biosecurity measures). This task could be scaled back (medium priority).

Task 2. Manage Argentine ant invasion and the native ant community

Argentine ant survey results will inform eradication or containment efforts for Argentine ants at the park. The park has identified funding sources if treatment for containment is required. If large-scale eradication is required, funding to support the California Conservation Corps will be secured. This management technique has been used successfully at Channel Islands National Park and San Clemente Island. Survey results will also allow the wildlife biologist hired through this project to identify the best quality habitat to re-introduce the horned lizards. Addresses MSP objective for invasive animals (MGT-PRP-[IAPL](#) INVANI-1, invasive animal management plan) and MSP objective for human uses of preserves (MGT-IMP-[BMP](#) HUMUSE-3, implement biosecurity measures). We will know by fall 2022 if this task can be scaled back.

Task 3. Re-introduce Blainsville's horned lizard to the Point Loma peninsula

Blainsville's horned lizards (VF species) will be sourced from coastal areas in San Diego that are planned for urban development, outfitted with radio transmitters, and transplanted to Cabrillo NM. Donor sites are being identified by the USFWS and CDFW as grading permits are being received for future development. Telemetered individuals will be monitored for two years to determine their fate (success/failure). We view this experiment as a first step to recovering some of the lost biodiversity on the Point Loma peninsula (i.e., rewilding: Butterfield et al. 2021), and to help recover the lizard in southern California. Horned lizards will likely be held by the San Diego Zoo between collection and re-introduction at CNM. This management technique has

not been implemented before, but will inform future re-introduction efforts. There are minimal negative impacts anticipated since horned lizards are native to the peninsula and urbanization is reducing other horned lizard populations. There will be no net loss of horned lizards with the proposed project. Addresses MSP objective for the Blainsville's horned lizard (MON-PRP-[MONPL PHABLA-2](#), monitoring horned lizards).

Task 4. Monitor herpetofauna community and compare with environmental factors

Initial work on this task was started during an internal program review of herpetofauna monitoring conducted by USGS and in summer 2021 by a full-time intern through the Latino Heritage Internship Program. Addresses MSP objective for climate change (MON-IMP-[WSTA CLICHN-2](#), automated remote sensing weather stations and soil moisture/temperature sensors). This task could be scaled back or removed (low priority).

Task 5. Administrative & data science support for Tasks 1-4

This task captures SANDAG reporting requirements and data management, data analysis, and data visualization required for Tasks 1.-4. This task is completely in-kind support from existing NPS staff (10 weeks salary each year from the program manager and 10 weeks salary each year from the marine biologist/data scientist).

Note on adjacent, conserved lands:

CNM is part of the Point Loma Ecological Conservation Area (PLECA), which includes land managers from National Park Service, the Navy, Veterans Affairs, and the City of San Diego. The Navy is the other primary landowner. Many of these activities are already occurring on Navy property that is part of the PLECA, including Task 2 and Task 4. It is likely that sites suitable for horned lizard re-introduction will be on Navy property and Task 3 will occur on adjacent, conserved lands.

Budget by Task

Please include a specific budget for each task described in the Scope of Work (Section B above). This should include both requested SANDAG funds and any matching funds proposed for each project year. *If matching funds are proposed, please distribute the match commitment proportionately.*¹ Applicants are encouraged to identify phasing in their application in case full funding for the project is not available. You may add or subtract rows and columns as needed. *This funding category is intended to fund restoration and enhancement projects taking place over a three- to five-year period and will not cover on-going annual costs within applicant's organization.*

Exhibit B – Proposed Project Budget

Task No.	Task Name	Year 1 Grant Request	Year 1 Matching Funds ¹	Year 2 Grant Request	Year 2 Matching Funds ¹	Year 3 Grant Request	Year 3 Matching Funds ¹	Year 4 Grant Request	Year 4 Matching Funds ¹	Total Grant Request	Total Matching Funds	Total Projects Cost
1	Create EDRR program for whiptails	\$32,500	\$0	\$16,000	\$0	\$20,000	\$0	\$20,000	\$0	\$88,500	\$0	\$88,500
2	Manage Argentine ant invasion	\$15,000	\$45,790	\$8,000	\$0	\$0	\$0	\$0	\$0	\$23,000	\$45,790	\$68,790
3	Re-introduce horned lizard	\$0	\$0	\$40,000	\$0	\$40,000	\$0	\$40,000	\$0	\$120,000	\$0	\$120,000
4	Monitor herpetofauna & environmental conditions	\$32,500	\$40,000	\$16,000	\$0	\$20,000	\$0	\$20,000	\$0	\$88,500	\$40,000	\$128,500
5	Administrative & data science	\$0	\$38,750	\$0	\$38,750	\$0	\$38,750	\$0	\$38,750	\$0	\$155,000	\$155,000
Subtotal		\$80,000	\$124,540	\$80,000	\$38,750	\$80,000	\$38,750	\$80,000	\$38,750	\$320,000	\$240,790	\$560,790

¹ Throughout the Project, Matching Funds must be proportionate to Total Project Costs (Grant Request and Matching Funds combined). For example, if a proposed project Year 1 Grant Request is \$80,000 and proposed Year 1 Matching Funds are \$20,000, the Total Year 1 Project Costs are \$100,000. Therefore, the required proportionate matching funds to provide per invoice during Year 1 of the project are 20% (e.g. invoice submitted for \$8,000 grant amount reimbursement and \$2,000 matching funds submitted). However, if the Year 2 Grant Request is \$70,000 and proposed Year 2 Matching Funds are \$30,000, while the Total Year 2 Project Costs also are \$100,000, the required proportionate matching funds increases per invoice during Year 2 of the project to 30% (e.g. invoice submitted for \$7,000 grant amount reimbursement and \$3,000 matching funds submitted). Retention will be withheld beyond the 10% retention for each invoice submittal that does not meet the proportionate matching funds requirement. These additional matching funds retained will not be released until the proportionate matching funds are reached for the project to-date.

Call for Projects for the Tenth Cycle of the
TransNet Environmental Mitigation Program Land Management Grant Program

Total	\$80,000	\$124,540	\$80,000	\$38,750	\$80,000	\$38,750	\$80,000	\$38,750	\$	\$240,790	\$560,790
Percentage	%	%	%	%	%	%	%	%	%	%43	%100

Project Schedule

Please include start and end dates relative to the anticipated Notice to Proceed (assumes fall 2022) for each task described in the Scope of Work (Section B above). Please list tasks for quarterly reporting on the status of the grant project and a final report on the outcome of the grant project. You may add or subtract rows as needed.

Exhibit C – Proposed Project Schedule (Assumes fall 2022 Notice to Proceed [NTP])

Task No.	Task Name	Proposed Start Date	Months Needed to Complete Task	Task End Date
1.	Create EDRR program for whiptails	"0" Months from NTP	"48" Months	12/31/2026
2.	Manage Argentine ant invasion	"0" Months from NTP	"24" Months	12/31/2024
3.	Re-introduce horned lizard	"12" Months from NTP	"36" Months	12/31/2026
4.	Monitor herpetofauna & environmental conditions	"0" Months from NTP	"48" Months	12/31/2026
5.	Administrative & data science	"0" Months from NTP	"48" Months	12/31/2026

Please explain why and how much additional time would be needed in the event of any delays due to NTP being provided beyond fall 2022 and/or unexpected weather conditions such as drought that could occur during the proposed project implementation.

No additional time would be needed if NTP is provided after fall 2022. Drought and other unexpected weather conditions should not impact project timeline.

Notice Regarding Prevailing Wages

California law requires that public works projects pay prevailing wages for workers.

Applicant acknowledges that any work that qualifies as a "public work" within the meaning of California Labor Code Section 1720 shall cause Applicant and its subcontractors to comply with the provisions of California Labor Code Sections 1775 et seq, which includes the payment of prevailing wages to all workers performing prevailing wage work.

Yes No

Applicant acknowledges that if Applicant or its subcontractors will engage in the performance of a public work as defined by California Labor Code Sections 1720 et seq. and will utilize persons who are not employees of a public entity, registration and payment of an annual registration fee to the California Department of Industrial Relations (DIR) shall be required of each entity performing the work. This requirement applies to anyone affected by the public works statutes found in the California Labor Code, including but not limited to landscapers, fencers, surveyors, soil testers, dredgers, heavy equipment operators, and inspectors.

Yes No

Applicant acknowledges that if Applicant will award any subcontracts for the performance of a public work:

- Applicant shall notify SANDAG 30 calendar days prior to the award of each subcontract so SANDAG can create a Project Registration Form (aka PWC-100 form) for each subcontract using the DIR online database. Applicant will provide to SANDAG the name, DIR registration number, and contractor's license numbers of each subcontractor so SANDAG can verify, prior to Applicant's award of the subcontract for a public work, that the selected subcontractor is currently licensed and registered with the DIR. If SANDAG finds that the selected subcontractor is not licensed and registered with the DIR, SANDAG will promptly notify Applicant and Applicant will not be permitted to award the subcontract to the selected subcontractor.

Yes No

- Applicant shall notify SANDAG ten business days prior to the subcontractor performing the prevailing wage work so SANDAG can prepare for labor compliance monitoring.

Yes No

- If there are any changes to a subcontractor or lower-tier subcontractor, Applicant will advise SANDAG of these changes as soon as those changes are known to the Applicant.

Yes No

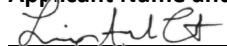
Required Statements from Applicant

- | Yes | No | |
|-------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant has read and understands the Sample Grant Agreement (Agreement) and Invoice Template (Attachment 4). |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | If the Board of Directors approves the proposed project application, the applicant agrees to sign and return the Agreement to SANDAG, without exceptions or amendments, within 45 days of receipt. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant agrees to comply with SANDAG’s Board Policy No. 035, Competitive Grant Program Procedures, which outlines “Use-it-or-lose-it” project milestone and completion deadlines. Board Policy No. 035 is included in the Agreement, and also is on SANDAG’s website at: sandag.org/organization/about/pubs/policy_035.pdf |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that 10% of all invoiced amounts will be retained until the completion of the proposed project. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that for proposed projects with matching funds, retention will be withheld beyond the 10% retention for each invoice submittal that does not meet the proportionate matching funds requirement. These additional matching funds will not be released until proportionate matching funds are reached for the project to-date. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that all invoices must be accompanied by written, documented support of the charges for requested reimbursement of grant funds and payment will not be made by SANDAG until all documents are satisfactorily submitted. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that invoices and reports must be submitted on a quarterly basis within three weeks after each period close covering January 1 to March 31; April 1 to June 30; July 1 to September 30; and October 1 to December 31. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that the EMP quarterly report template (to be sent to the grantee after NTP is issued and can be found at sandag.org/index.asp?classid=17&projectid=447&fuseaction=projects.detail) must be used to document quarterly progress and that invoices with errors will be returned to the grantee for correction prior to being processed by SANDAG staff. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that the final invoice must be accompanied by written, documented support of the charges for requested reimbursement of grant funds; a final report (prepared in accordance with the final report template to be sent to grantee after NTP is issued and can be found at sandag.org/index.asp?classid=17&projectid=447&fuseaction=projects.detail); and all outstanding deliverables in order to receive final payment and have retained funds released. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant understands that to be considered eligible for funding, a resolution complying with the requirements of Board Policy No. 035, Section 4.1, must be submitted to SANDAG at least <i>two weeks</i> prior to the recommendation by the Regional Planning Committee of the list of prioritized project applications. SANDAG will provide applicants with advance notice of the Regional Planning Committee’s anticipated meeting date. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | The applicant agrees to submit all project data/information to SANDAG and to upload data and reports to a project page created by the applicant on the SDMMMP web portal in a format consistent with regional management databases. |

I have the authorization to submit this application (Grant Application and required supplementary materials) on behalf of my organization.

Linh Anh Cat, Program Manager for Resources Management & Science

Applicant Name and Title (print or type)



January 14, 2022

Applicant Signature

Date

