

Crafting a Scope of Work: Writing Objectives, Tasks, and Deliverables

JORDAN WEIBEL
RESEARCH GRANTS PROGRAM LEAD



Scope of Work (SOW) Virtual Session Objectives

Understand the purpose and role of each of the following components in a SOW:

- Intended Audience
- Project Abstract
- Project Summary
- Team Members
- Goals
- Objectives
- Tasks
- Deliverables

SECTION 3: SCOPE OF WORK AND BUDGET

(20 Percent Weight)

Project Abstract:

Provide a succinct (600 characters maximum) and accurate abstract of the project, including the project purpose, priorities, scope, and grant beneficiaries. Beneficiaries include any communities, persons, or entities that benefit from this funding. This summary should be in clear language and understandable to technical and non-technical readers.

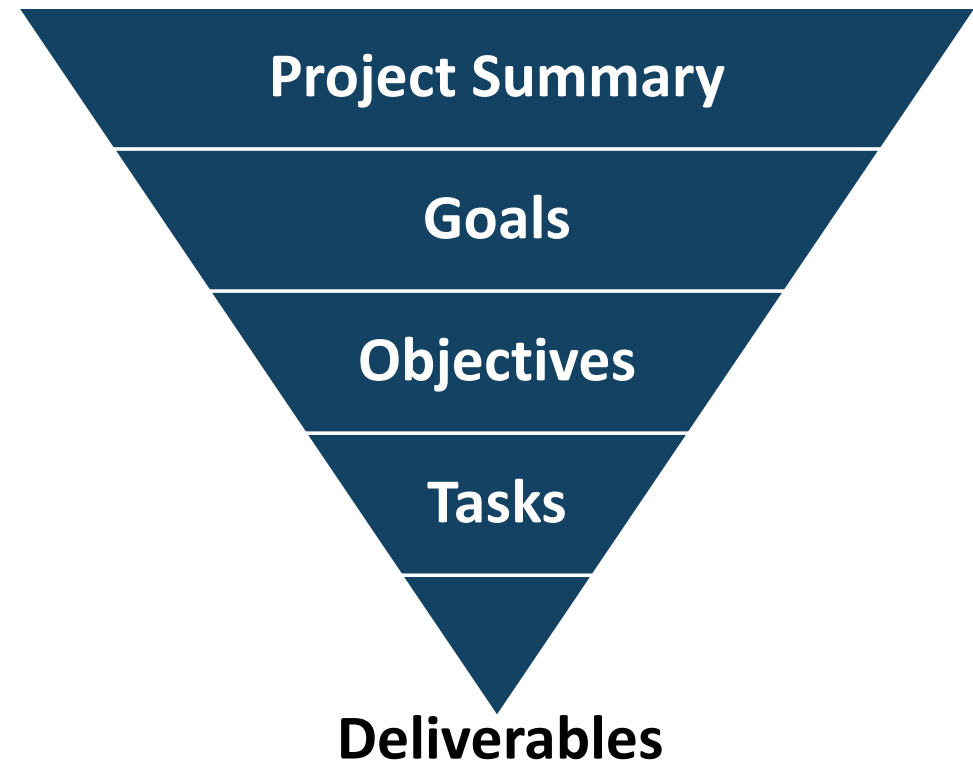
Project Summary:

Provide a succinct (1 page maximum) and accurate description of the project. The summary should include the experimental design (controlled or observational), methods (statistical, modeling, and other), and any software that will be employed. Additionally, the summary should address the relevance of the project to the mission of the Department.

Overview

The Scope of Work (SOW) includes:

- General information about the proposed project: **title, abstract, summary, goals, and team members**
- Details of how the project will be carried out: **objectives and tasks**
- What will be provided to DPR and when: **deliverables and due dates**



Audience

- The SOW is read by people with a wide variety of backgrounds and experience levels including the Pest Management Advisory Committee (PMAC) and DPR internal reviewers
- The SOW is intended to show how the project will accomplish its goals and objectives
- For funded projects, the SOW submitted in the proposal is used to begin developing the grant agreement between DPR and the grantee
- In general, the SOW should:
 - Use a formal tone and clear language
 - Avoid jargon and define any acronyms used
 - Be understandable to scientific and non-scientific audiences

Project Abstract

- This brief statement (600-character limit) is a streamlined version of the project summary and should include the proposed project's **purpose, priorities, scope, and grant beneficiaries**
- Grant beneficiaries are those who will benefit from the execution of the funded project
 - i.e. communities, stakeholders, individuals, organizations, entities, etc.
- For funded grants, this statement will be provided and posted to the California Grants Portal
- The abstract should be succinct and understandable to the general public

Project Abstract (continued)

Example from the Sample Alliance Scope of Work:

Purpose:	This project will increase the adoption of early detection and rapid response (EDRR) to support the management of invasive plants in California wildlands
Priorities:	while reducing the number of pesticide applications and amounts of pesticide required to control them.
Scope:	Community science networks will be created by recruiting members of the public, volunteer groups, and work crews, and provided with tools to detect and record early populations of invasive plants.
Grant Beneficiaries:	This work will benefit Californians whose health may be impacted by ecosystems degraded by invasive plants or the pesticides used to manage them.



Project Summary

- A brief (one page maximum) and compelling description of the proposed project
 - Should be understandable to the general public
- The project summary should:
 - Provide a broad overview of the proposed project
 - Address the relevance of the project to the mission of the department
 - Not include/rely on references

Project Summary: *Research Grants*

Key details to include:

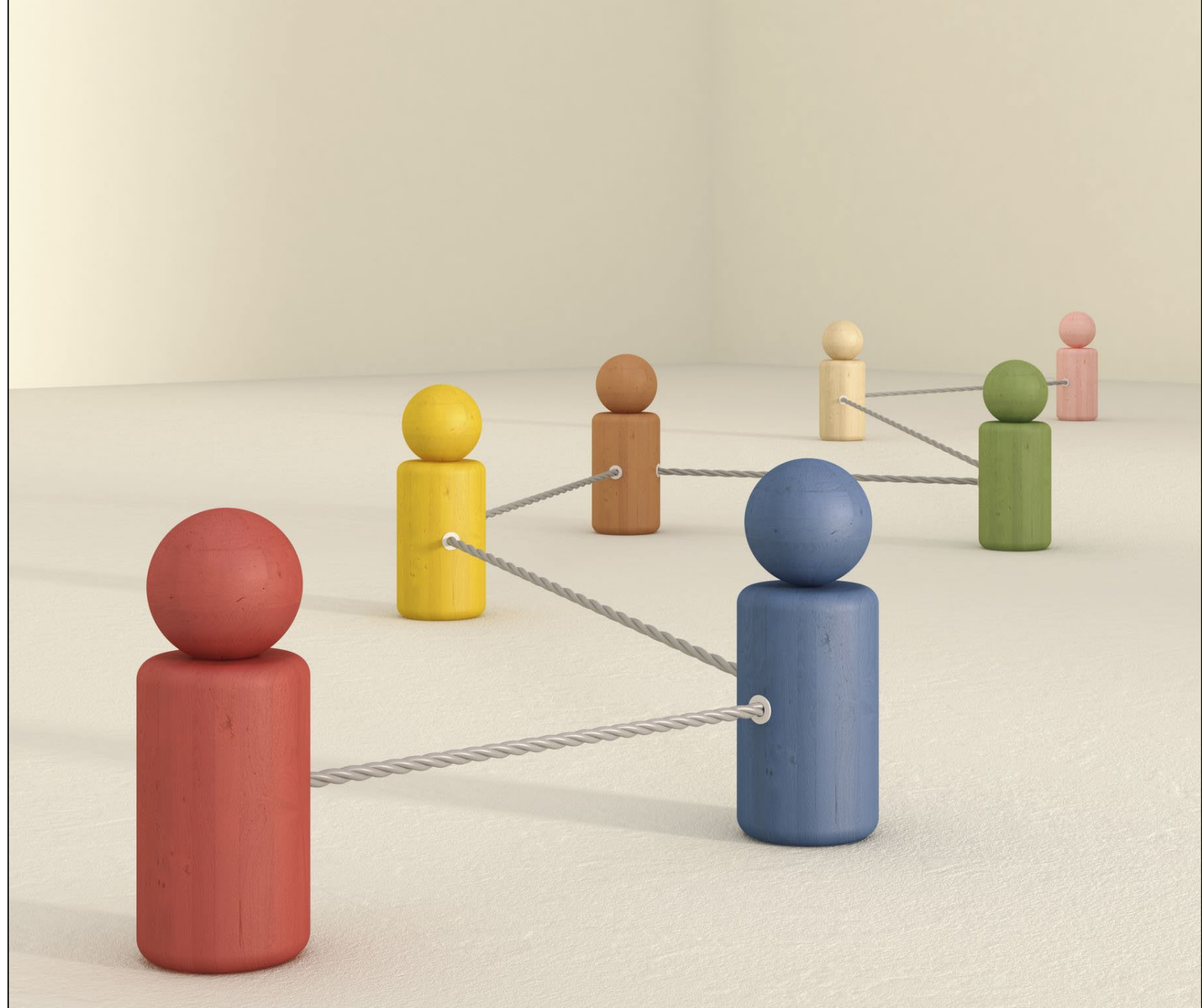
- Experimental design (controlled or observational)
- Methods (statistical, modeling, etc.)
- Relevance of the project to DPR's mission



Project Summary: *Alliance Grants*

Key details to include:

- Target audience and geographical area
- Outreach/communication framework that will be used
- Potential for implementation, expansion, and adoption
- Methods for measuring success
- Relevance of the project to DPR's mission



Project Summary Example (1/2)

Example from the Sample Alliance Scope of Work:

Purpose:	This project will increase the adoption of early detection and rapid response to support the management of invasive plant species and reduce or eliminate the use of pesticides in California's wildlands...
Target Audience:	This project proposes to employ community science by engaging members of the public, volunteer groups, and work crews, and giving them the tools to detect and record potentially invasive plants.
Geographic Area and Outreach Framework:	Efforts will initially focus on parks in the Sacramento Valley before expanding throughout California with outreach to other regions, such as the East Bay Area, Monterey Bay, and North Coast (letters of support from partnering regions included in application package).

**The full project summary can be found in the Sample Alliance Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Alliance Grant Application Materials webpage.*

Project Summary Example (2/2)

Example from the Sample Alliance Scope of Work:

Measurement of Success:	Measurements of project success, such as the number of people trained and the number of verified observations that result in management action after the Sacramento Valley trainings, will inform suggestions for program improvement prior to extending the early detection and rapid response program to other regions.
Implementation Potential and Relevance to Department Mission:	Furthermore, by promoting relationships and direct communication between community scientists and local land managers, invasive plant populations will be identified and addressed more promptly, resulting in more effective non-chemical control efforts and a decrease in pesticide use to effectively control those populations.

**The full project summary can be found in the Sample Alliance Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Alliance Grant Application Materials webpage.*

Team Members: The Principal Investigator (PI)

- Individual who has the primary responsibility for financial management and control of project funds and is responsible for all aspects of project administration, including:
 - ensuring the scientific integrity and management of the project;
 - ensuring the financial management of project funds;
 - adhering to DPR's terms and conditions including reporting and record keeping requirements contained in the grant agreement;
 - and monitoring the performance and expenditures of consultants, subcontractors and subawardees prior to approving their invoice.
- Must personally participate in the project to a significant degree
- There may be cases where a co-PI (or co-PIs) is acceptable
- A curriculum vitae or resume must be provided for the PI in the application package

Team Members: Key Personnel

- Individuals who contribute to the scientific development or execution of the project in a substantive, measurable way, whether or not salaries are requested
- Must devote a measurable percentage of effort to the project
- Time commitment/percent of effort must be documented
- Does not include students or other named staff not specifically required for the completion of the scope of work
- A curriculum vitae or resume must be provided for key personnel in the application package
- If the project is funded, any changes in key personnel will require a grant amendment

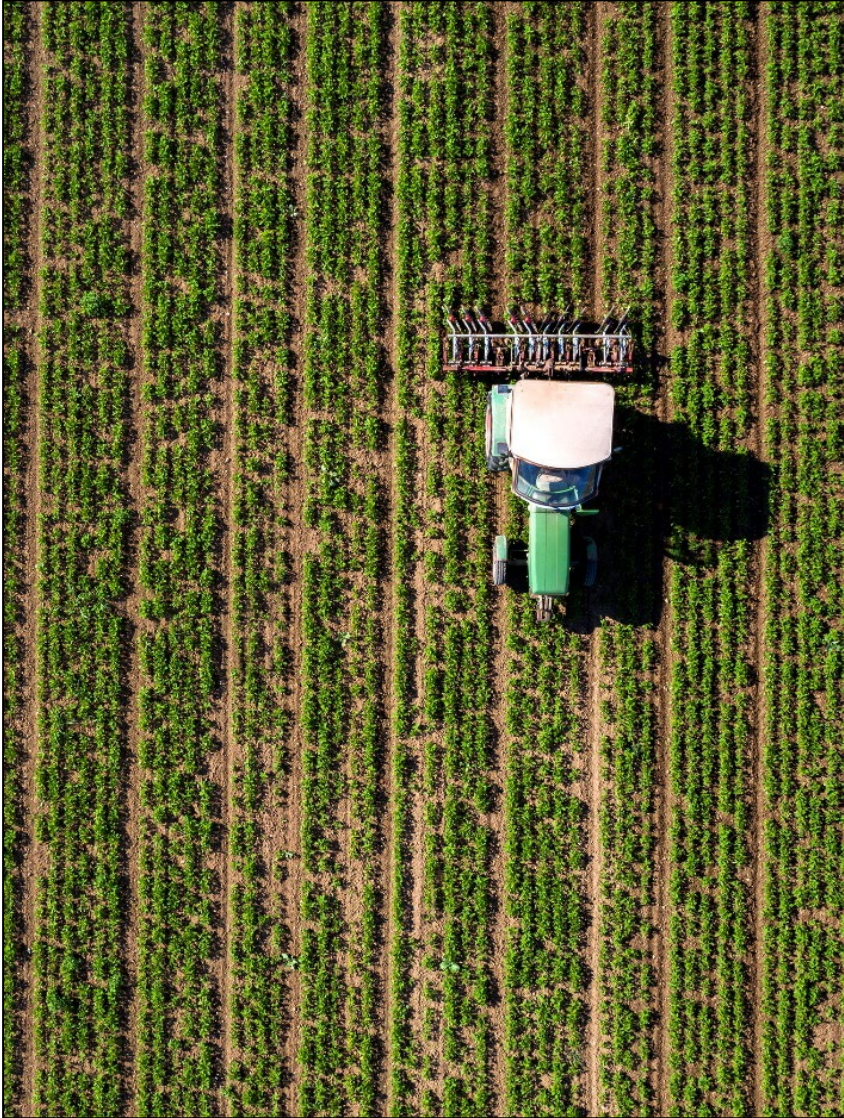
Team Members: Non-Key Personnel

- Students or other named staff not specifically required for completion of the SOW
- If a role has yet to be filled, 'TBD' (to be determined) can serve as a placeholder
- For Alliance Grants, list all known Alliance Team members
 - For roles that are known but unfilled, list as TBD and a description of the Alliance Team role
 - To learn more about Alliance Teams, consider reviewing the 'Building a Strong Alliance Team' informational video

Team Members

Example from the Sample Alliance Scope of Work:

Name	Organization	Role on the Project
Anne Vassiv	California Habitat Conservancy	Principal Investigator
Erin Dao	California Habitat Conservancy	Non-Key Personnel
Tim Ericks	California Habitat Conservancy	Non-Key Personnel
Beau Tannock	CalPhyta	Key Personnel
Al Anthis	California Wildlands Protection Agency	Key Personnel
Rob Inya	Sacramento Valley Regional Park District	Key Personnel
Phil Ariss	Boots On Sacramento	Non-Key Personnel
Sal Zola	Friends of Sacramento Parks	Non-Key Personnel



Goals

- Goals are general, bulleted statements about what the project needs to accomplish to fulfill its stated purpose
- Goals should be measurable and achievable
- Goals are closely correlated with the deliverables

Example Goals from Alliance Scope of Work

- Engage and educate community members and field crews in identifying and documenting observations of invasive and early detection and rapid response-listed species through the use of a mobile application
- Devise a plan for land managers to verify observations submitted by community members and field crews and implement appropriate control, favoring non-chemical methods
- Evaluate and refine the early detection and rapid response program for future adoption
- Perform outreach by promoting and demonstrating the program in other regions

**This example can be found in its entirety in the Sample Alliance Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Alliance Grant Application Materials Webpage.*

Example Goals from Research Scope of Work

- Evaluate prophylactic treatments and delivery methods for suppressing *Xylella fastidiosa* in grapevine
- Optimize conditions for establishing and maintaining parasitoid wasp populations to combat glassy-winged sharpshooters in citrus groves
- Determine if an integrated pest management (IPM) system incorporating prophylactic treatments in vineyards and parasitoid wasp-mediated suppression of glassy-winged sharpshooters in citrus groves synergistically reduce the prevalence and spread of Pierce's disease

**This example can be found in its entirety in the Sample Research Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Research Grant Application Materials Webpage.*

Objectives

- Objectives are short statements that include descriptions of the process that will lead to results that will achieve the project's goals
 - Objectives are more specific than goals
- One or more objectives must be developed for each goal
- Objective 1 is consistent across all grants and cannot be modified by the applicant

Objective 1

Objective 1: Conduct general grant administration and deliver an outreach plan, required meetings, quarterly and annual progress reports, invoices, and a final report. *(Do Not Modify Objective 1 and its associated tasks. These are required for all DPR grants.)*

Task 1.1 Initial project meeting: The grant manager and the principal investigator will meet in person or virtually within 30 days after the grant agreement has been executed. The agenda will be to review the role of the principal investigator, the project timeline, the project deliverables, and to discuss any questions about the objectives and tasks. The grant manager may require additional meetings as needed. The grant manager will write up meeting minutes and share with all attendees after the meeting.

Deliverable: Meeting agenda as a Microsoft Word file via email (one week in advance) and revisions to the meeting minutes (within 14 days of receiving the meeting minutes).

Due Date: Meeting within 30 days from the full execution of the grant agreement and meeting minute revisions within 14 days of receiving meeting minutes.

Objective 1: Research Grants

Task 1.2 Research plan: Provide a research plan with the proposed experimental design(s) for the Department's review and approval for each of the experiments or studies. Include detailed accounts of relevant methods and procedures, working hypotheses, working significant treatment differences that are relevant for decision makers, experimental design, choice of statistical software, treatments, sampling methods, response variables, analytical methods, treatment means comparison methods, study sites, and study site characterization.

Deliverables: The research plan as a Microsoft Word file inclusive of written explanations, tables, figures, or images needed to fully convey the plan.

Due Date: Within 30 days after the grant agreement is executed.

Objective 1: Alliance Grants

Task 1.2 Outreach plan: Provide an outreach plan for the Department's review and approval that provides the Alliance Team members, the schedule, the methods to accomplish the outreach, and the measures of success for determining if the outreach is effective.

Deliverables: The outreach plan as a Microsoft Word file inclusive of written explanations, tables, figures, or images needed to fully convey the plan.

Due Date: Within 30 days after the grant agreement is executed.

Objective 1

Task 1.6 Annual reports: The annual reports must contain the information required on the template. The annual report should include relevant results, problems, and special situations that are explicitly related to project deliverables and any potential or actual effects on the deliverables or their completion dates. Additionally, the annual report must include a project work plan for the coming year and any expected modifications from what was originally proposed in the grant agreement and/or the applicable research or outreach plan. Submit annual reports to grant manager.

Deliverables: Annual reports completed using the template due June 30 of each year (except for the year the final report is due) following grant execution as a Microsoft Word file via email.

Due Date: Every June 30 except the year the final report is due.

Objective 1

Task 1.8 Final report: Final report, incorporating any feedback, edits, or revisions to the draft final report. Submit final report to grant manager. Final reports may be published on DPR's website for review by the public.

Deliverable: Final report as a Microsoft Word file and high-resolution files (jpeg, png, tiff, etc.) of all photos, figures, and illustrations included in the final report via email (security settings should be unlocked, not password protected).

Due Date: June 30 of the final year of the project.



Example Objective from Research Scope of Work

Objective 2: Identify the most effective prophylactic treatment and delivery method for suppression of *Xylella fastidiosa* in grapevine.

- Note how this example objective corresponds directly to the first goal from the example list of goals previously shown:
 - ***Goal: Evaluate prophylactic treatments and delivery methods for suppressing Xylella fastidiosa in grapevine***

**This example can be found in its entirety in the Sample Research Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Research Grant Application Materials Webpage.*

Tasks

- Tasks are descriptions of the step-by-step work plan activities that must be successfully completed to achieve the stated objectives
- Tasks may include:
 - Modeling, experiments, analyses, field trials, meetings, developing training materials, conducting surveys
- Tasks generate data and other end results

Example Task from Research Scope of Work

Task 2.1 Greenhouse study to assess the effects of three different foliar-sprayed antimicrobial compounds on *Xylella fastidiosa* in grapevine: Grapevines will be inoculated with *Xylella fastidiosa* and populations will be allowed to grow for one month. After the incubation period, three compounds that have been shown to reduce *Xylella fastidiosa* populations in laboratory settings will each be combined with a surfactant and applied to the foliar tissue. Grapevines sprayed with water + surfactant will serve as a positive control. Grapevines will be arranged using a random block design and Pierce's disease symptoms will be quantitatively measured and tissue samples will be collected for bacterial quantification via quantitative Real-Time PCR (qRT-PCR).

**This example can be found in its entirety in the Sample Research Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Research Grant Application Materials Webpage.*



Tasks

- When describing tasks, try to avoid overly specific details (such as the proposed experimental design or statistical analyses)
- Task descriptions should provide enough detail to show that there is a clear plan for achieving the project's objectives, while being broad enough to allow for flexibility in the experimental design
- Instead of incorporating more detailed task descriptions in the scope of work, these should be included in Question #4 of the proposal application
 - If the proposed project is funded, the details provided in Question 4 will be finalized in the Research Plan/Outreach Plan (Task 1.2)



Deliverables

- Deliverables are the end results or products of tasks
- Provide tangible and specific proof that a task has been completed
 - Deliverables describe whether the task was successful or not
- One or more deliverable must be specified for each task, and each deliverable must specify a due date

Example Deliverables from Research Scope of Work

EXAMPLE 1

Task 2.1 Greenhouse study to assess the effects of three different foliar-sprayed antimicrobial compounds on *Xylella fastidiosa* in grapevine.

- **Deliverable:** Report detailing results along with tables, figures, images, and statistical analyses as needed to support the findings

EXAMPLE 2

Task 5.3 Publish results of the project in trade journals.

- **Deliverable:** Final drafts of articles to be published in trade journals will be submitted 20 business days prior to publishing date

**These examples can be found in its entirety in the Sample Research Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Research Grant Application Materials Webpage.*



Deliverable Due Dates: Linear Tasks

For tasks that rely on the completion of the previous task, the corresponding deliverables should have separate due dates.

- For example, if one task is carrying out a field trial and another is analyzing the results from that trial, the two tasks should have separate due dates



Deliverable Due Dates: Recurring Tasks

For tasks that repeat, include multiple deliverable due dates.

- Irregular schedule examples: attending multiple conferences or administering multiple trainings
- Regular schedule examples: annual repeats of identical field trials or quarterly summaries of outreach events conducted

Deliverable Due Dates: Recurring Tasks Example

Create series of due dates for single recurring task:

Task 5.2 Outreach: Present most recent results at Citrus and Grape Grower annual meetings.

Deliverable: Submission of presentation materials 20 business days prior to each meeting.

Due Date: April 30, 2025; April 30, 2026.

**This example can be found in its entirety in the Sample Research Scope of Work and Budget contained within the Supplemental Guidance Documents included on the Research Grant Application Materials Webpage.*



Deliverable Due Dates: Tips for Success

- Deliverables intended for public release must be submitted for review at least 20 days prior to publication
 - Due dates should be at least 20 days prior to any publication deadlines
- Final deliverable due date must occur before the project end date of June 30 of the final year of the project
- Aim to include a moderate level of detail in deliverables
 - Extensive detail should instead be included in the Task 1.2 deliverable – research or outreach plan

Review: Example From Alliance Scope of Work

PROJECT: Employing community science for early detection and rapid response to optimize control of invasive plants in California wildlands.

GOAL: Engage and educate community members and field crews in identifying and documenting observations of invasive and early detection and rapid response-listed species through the use of a mobile application.

OBJECTIVE: Prepare members of the public and field crews to participate as community scientists in monitoring for early detection and rapid response species.

TASK: Produce instructional materials. Create digital content to teach community scientists how to identify plants and use CalPhyta to record observations. This content will include instructional videos demonstrating the process of monitoring and recording observations in the field. Part of this effort will include creating a social media page to host this content and communicate with community members about the project and upcoming trainings.

DELIVERABLE: Files of all content created, along with the web address for the social media page. Files will be sent to the Grant Manager via email at least 20 days prior to publication for review and approval by DPR.

General Reminders and Tips for Success

- Avoid linear timelines where deliverables depend on prior deliverables, if possible
 - Linear timelines can cause increasingly significant delays when a single deliverable is delayed
- Define acronyms the first time they are used and avoid jargon
- Read the applicable terms and conditions - University of California (UC) or non-UC
 - Verify that no terms are violated within the proposed scope of work
 - Example: No travel outside of California is allowable
- Make sure to proofread the entire document
 - Check that due dates are correctly recorded in the schedule of deliverables table
- Remember that all reviewers will also read the grant application questions
 - Avoid including redundant information that is not pertinent to the scope of work and write for all audiences (scientific and non-scientific)

Where Can I Learn More?



The screenshot shows the top navigation bar of the California Department of Pesticide Regulation (CDPR) website. It includes the CA.GOV logo, a globe icon, and social media icons for home, Facebook, Twitter, LinkedIn, and YouTube. The main header features the CDPR logo and the text "California Department of Pesticide Regulation". Below this are two menu items: "Programs" with a clipboard icon and "Databases" with a folder icon. The main content area displays the title "Pest Management Grants" and two links: "Back to Pest Management" and "Back to Pest Management and Analysis Program".

<https://www.cdpr.ca.gov/dprgrants.htm>

Email us at IPMGrants@cdpr.ca.gov