

P3 Abstract Format

The abstract should include the information described below. Examples of abstracts for previous P3 grants may be found on the P3 web site (<http://www.epa.gov/P3>).

- a. Funding Opportunity Number(s) and Research Area(s):** Enter the full name of the solicitation (*P3 Awards: A National Student Design Competition Focusing on People, Prosperity and the Planet*) and one of the funding opportunity numbers (FONs) and associated research areas under which you are submitting your proposal. The FONs and their associated research areas are listed at the beginning of the solicitation. If your project is relevant to more than one research area, you may list additional research areas, labeled as such.

Please note: Place the Funding Opportunity Number to which the proposal is being submitted in the upper right side of the “header” of the Abstract page. Each application should be submitted using a single FON.

- b. Project Title:** Use the exact title of your project as it appears in the application. The title should be brief yet represent the major thrust of the project. Because the title will be used by those not familiar with the project, use more commonly understood terminology. Do not use general phrases such as “research on.”
- c. Principal Investigator (P.I.):** This person will serve as the faculty advisor to the P3 student team. List the name of the PI and then the names and affiliations of any co-investigators/advisors who will significantly contribute to the project. Provide a web site URL or an e-mail contact address for each investigator.
- d. Institution:** In the same order as the list of investigators, list the name, city and state of each participating university or other applicant institution. The lead institution applying for assistance must be clearly identified.
- e. Student Team:** If student investigators are known at the time of the proposal, list student investigators and indicate whether each student is an undergraduate or graduate student. If student investigators are not yet known, provide a brief explanation of how and when the P3 student team will be formed.

- f. Student Represented Departments and Institutions:** List the departments and institutions that will be represented by the students participating on the team.
- g. Project Period and Location:** Show the proposed project beginning and ending dates and the performance site(s)/geographical location(s) where the work will be conducted.
- h. Proposed EPA Project Cost:** Show the total dollars requested from the EPA, including direct and indirect costs. (This cannot exceed \$75,000.)
- i. Project Summary:** Provide the following three subsections:
- **Objective:** Identify the EPA Strategic Plan goal/objective from Section I.D of the solicitation being addressed. Within the selected research area, define the technical challenge being addressed, describe how the proposed design will address the challenge, and identify the innovative scientific or technical aspects of the application. Explain how the project will benefit people—for example, those in small, rural, tribal and/or underserved communities.
 - **Description:** Describe the project/design and how it relates to the four P3 strategic principles. Also identify how the P3 Project will provide education on the project’s purpose, approach, results, impacts and outcomes of the research at the university and/or community level.
 - **Results:** Identify the expected outputs/outcomes of the project and provide a description of the strategy for measuring results, evaluation and demonstration.
- j. Contribution to Pollution Prevention or Control:** Provide a brief statement describing how the proposed project/design will further the goals of pollution prevention and/or control.
- k. Supplemental Keywords:** Without duplicating terms already used in the text of the abstract, list keywords to assist database searchers in finding your research.

EPA's P3 Award Program

Research Areas and Suggested Keywords

Research Areas:

Clean and Healthy Air

Examples of relevant topic areas include, but are not limited to, assessment of human and ecosystem exposures and effects associated with air pollutants on individual, community, regional, and national scales; development and evaluation of approaches to prevent and reduce air pollution, particularly sustainable, cost-effective, and innovative multipollutant and sector-based approaches; and human exposure and environmental modeling, monitoring, metrics, and information needed to inform air quality decision making at the state, tribal and local level.

Clean and Safe Water

Examples of relevant topic areas include, but are not limited to, research on assessing the distribution, composition, remediation and health impacts of known and emerging chemical and biological contaminants in drinking water; and innovative approaches or tools for managing ambient water quality to protect human health and aquatic life.

Safeguard and Revitalize Communities

Examples of relevant topic areas include, but are not limited to, innovative methods and technologies to characterize and to remove contaminants from environmental media (e.g., soil, water, air); research to build community resilience to potential pollution resulting from natural disasters and extreme events; and development of innovative solutions to waste management, as well as techniques and technologies that allow for the beneficial reuse of products and materials.

Ensure Safety of Chemicals

Examples of relevant topic areas include, but are not limited to, development of technologies and approaches that aid the collection and management of chemical data/information (including strategies to reduce or replace animal testing) and tools to assess their feasibility; and development of information technology and software tools to mine ever-expanding data sources for information on chemical exposures and toxicities.

P3 Keywords:

Media: (air, ambient air, water, drinking water, wastewater, watersheds, groundwater, land, soil, sediments, climate change, global climate, indoor air, mobile sources, marine, estuary, precipitation, leachate, adsorption, absorption, chemical transport)

Risk Assessment: (exposure, risk, risk assessment, effects, health effects, ecological effects, human health, environmental justice, bioavailability, metabolism, vulnerability, sensitive populations, dose-response, carcinogen, teratogen, mutagen, animal, mammalian, organism, cellular, population, enzymes, infants, children, elderly, stressor, age, race, diet, metabolism, genetic pre-disposition, genetic polymorphisms, sex, ethnic groups, susceptibility, cumulative effects)

Chemicals: (toxics, toxic substances, particulates, PFAS, PFOA, metals, heavy metals, solvents, oxidants, DBPs, nitrogen oxides, sulfates, microplastics, organics, effluent, discharge, dissolved solids, intermediates)

Pathogens: (toxins, microbial contaminants, HABs, microorganisms, viruses, bacteria)

Risk Management: (pollution prevention [sustainable chemistry, life-cycle analysis, alternatives, sustainable development, clean technologies, innovative technology, nanotechnology, renewable, land management, waste reduction, waste minimization, waste management, environmentally conscious manufacturing]; treatment [remediation, bioremediation, cleanup, incineration, disinfection, oxidation, restoration])

Scientific Disciplines: (environmental chemistry, toxicology, public health, mathematics, technology, marine science, biology, physics, engineering, social science, ecology, hydrology, geology, histology, epidemiology, genetics, pathology, limnology, entomology, zoology)

Methods/Techniques: (innovative, sustainable modeling, monitoring, analytical, surveys, measurement methods, general circulation models, climate models, satellite, landsat, remote sensing)

Geographic Areas: (Northeast, Central, Northwest, Chesapeake Bay, Great Lakes, Midwest, Mid-Atlantic, states: {use both full name and two letter abbreviation}, EPA Regions 1 through 10, Tribes)

Sectors: (water, agriculture, business, transportation, industry {petroleum, electronics, printing, etc.}, {identify 4 digit SIC codes}, service industry, food processing, etc.)