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# Deserts Project Guidance





# Introduction

Deserts are commonly defined as dry regions receiving less than 10 inches of rain per year on average. Deserts generally have sparse plant cover, except in depressions where water accumulates. In many cases, the sandy, stony or rocky substrate contributes more to the appearance of the landscape than does the vegetation.

Deserts range from: hot deserts, such as the Sonoran Desert, Mojave Desert and Chihuahuan Desert of North America, and the Sahara Desert of Africa; temperate deserts, as in the Takla Makan Desert of China; and cold deserts, where precipitation falls mainly as snow or fog, such as the Atacama Desert of South America, the Gobi Desert of Asia, and the remote desert of Antarctica.

Deserts can be biologically rich habitats with a vast array of animals and plants that have adapted to the harsh conditions. In general, desert animals have developed adaptations to help them keep cool and use less water. Some animals are nocturnal, while others spend much of their time underground. Desert plants may survive extended periods without precipitation or fresh water; some have adapted by growing long roots to tap underground water. Other plants such as cacti have specialized ways of storing and collecting water. Because of these special adaptations, desert plants and animals are more vulnerable to introduced species and predators.

# Building Your Program

Projects are divided into four categories: **Habitat**, **Species Management**, **Education and Awareness** and **Other Options**. You can build a program with more than one of each category but you must associate your program with at least one habitat. This Deserts Project Guidance is in the **Habitat** category. You will be able to associate your desert project with **Education and Awareness** projects, as well as with **Species Management** projects like those focused on birds, reptiles, amphibians and invasive species.



**Habitat** – Projects that focus on conservation actions to protect, restore and manage different habitats.



**Species Management** – Projects addressing the conservation needs of targeted wildlife species or groups of species.



**Education and Awareness** – Projects to improve awareness, understanding and skills relating to conservation and the environment.



**Other Options** – Specialized projects that add value to your conservation efforts.

Browse the Project Guidance library at [wildlifehc.org/pg](http://wildlifehc.org/pg).

# What Do Desert Projects Look Like?

Desert projects primarily seek to create desert ecosystems, and manage, enhance or restore existing desert habitat.

Due to the water-limited environment of desert habitats, a component of desert projects can involve increasing the availability of water resources for wildlife, such as creating open water sources or other water management efforts.

Long-term monitoring and management of desert project components like plantings and enhanced water resources is important to ensure the project is successful. It is also important to share both successes and lessons learned to help broaden the knowledge base on desert projects.

Desert projects can vary in size, depending on their location and the amount of land and resources available. Larger tracts can provide nesting, cover, and foraging for a variety of wildlife, while smaller tracts provide fewer benefits. Any size desert can provide important educational opportunities.

# Considerations for Corporate Lands

Projects implemented on corporate-owned lands have different circumstances and challenges to those on public lands, protected lands or wild lands.

## **Which types of corporate lands are best suited for desert projects?**

In appropriate locations, both large and small tracts of corporate lands in arid landscapes provide many opportunities for management or restoration of desert habitat. Smaller properties in urban sites can provide important landing spot for pollinators and bird species.

## Addressing challenges

The corporate context presents certain challenges for implementing desert projects. Understanding these concerns and potential ways to overcome them can help your project succeed in the long term.

Concern	Response
Successful restoration of desert habitat takes considerable time and effort, and can be complex.	<i>Teams should seek out resources and technical advice to determine appropriate seed mix or plantings, and explore techniques like dimpling, furrows and drip irrigation to increase the survival of planting.</i>
In a degraded area, it may be challenging to develop proper restoration goals.	<i>Finding a nearby existing healthy, undisturbed desert habitat can provide a model for a locally-appropriate desert project. If a nearby site is not available, researching the region's history and ecology can inform goals.</i>
Desert plant that are locally-appropriate may take time and effort to locate.	<i>Teams should use reference information and technical advice about their region.</i>

Concern	Response
<p>Volunteers will likely have knowledge gaps.</p>	<p><i>Knowledgeable staff or local experts from an existing initiative, NGO, state/provincial natural resource agency, cooperative extension or university can provide volunteers with information that will equip them with the knowledge needed for successful project implementation.</i></p>
<p>Invasive plants can threaten the success of a desert project.</p>	<p><i>A commitment to long-term monitoring and maintenance can help combat invasive plants and create a stronger project.</i></p>

# Getting Started with Desert Projects

## **For a project to qualify toward Conservation Certification, you must be able to answer “yes” to five questions.**

1. Is the project locally appropriate?
2. Does it have a stated conservation or education objective?
3. Does it provide value or benefit to the natural community?
4. Have outcomes been measured and is there supporting documentation?
5. Does it exceed any pertinent regulatory requirements?

## **Conservation and education objectives**

It is a requirement of Conservation Certification that desert projects be designed to meet one or more conservation objectives. Objectives can guide the direction of the project, help motivate others to participate, and provide a basis for evaluation.

The following are suggested objectives for desert projects. Your team may choose one or more of these objectives, or develop your own relevant objectives.

- Restoring or creating a diverse mosaic of desert habitat that will provide for both plant and animal species
- Managing desert habitat to benefit a specific desert-associated species or suite of species
- Managing desert habitat to promote native plant species and reduce the amount of non-native and invasive species
- Monitoring the desert habitat to ensure it's long term success
- Providing examples and education for employees and community members on certain features or functions of a desert habitat and its wildlife
- Increasing water availability for desert wildlife



**The following strategies are recommended to strengthen the conservation impact of your project:**

- Be meticulous about sourcing native plants and other engineering materials
- Plant and manage the desert habitat so that it contains or exceeds a minimum level of diversity appropriate to the region
- Connect to larger local, regional and landscape-scale initiatives for desert conservation
- Monitor the desert habitat for invasive species and apply appropriate methods for control when invasive species are identified
- Develop and implement a multi-year monitoring plan
- Include regular, credible monitoring of one or more desert-associated species, such as birds, mammals, pollinators, reptiles or imperiled species
- Establish a baseline of plant and animal species in the desert habitat, upon which desired outcomes can be based and evaluated
- Provide multiple ecological functions
- Demonstrate an understanding of why each species was chosen for the planting list or why a seed mix was chosen as a whole, including wildlife benefit, substrate and light requirements, or its role in the natural community being restored
- Provide opportunities for college students, professors, and other scientific professionals to conduct research in the desert habitat that is used to inform the project
- Include credible monitoring that contributes to a citizen science program or the database of an established desert conservation organization
- Plan features for human use or convenience, such as roadways, fence lines, and trails, in a way that minimizes their impact on wildlife and on the fragmentation, destruction and disturbance of existing desert habitat
- Be located adjacent to or near an existing protected or restored desert habitat and managed in alignment with that habitat
- Maintain or commit to maintain the project over the long term

## Partnerships

Desert habitat projects implemented on corporate lands can benefit from partnerships with groups that have established desert conservation or education objectives. A team can use such a partnership to help design, create, or monitor its desert project and provide educational opportunities for employees and community members. Partners may also be able to assist the team with leveraging funds for implementing and maintaining the project, and can help create links between the on-site project and other desert projects or conservation priorities in the region.

## Resources

Your project may benefit from online or printed resources available for your region to support the design, delivery, maintenance and monitoring of desert projects.

A search for “desert” in the Conservation Registry returns 15 projects implemented through WHC’s certification program. This is a great place to find inspiration for your project and see what others are doing in and around your location.

The following terms, in any combination, may be useful when searching online for items related to this theme:

<b>desert</b>	<b>guzzlers</b>
<b>desert ecosystem</b>	<b>drinkers</b>
<b>dryland</b>	<b>tinaja</b>
<b>arid</b>	<b>water development</b>
<b>arid ecosystem</b>	<b>dimpling</b>
<b>desertification</b>	<b>pitting</b>
<b>xeric</b>	<b>irrigation</b>
<b>xeriscape</b>	<b>drip irrigation</b>
<b>cactus/cacti</b>	<b>livestock exclusion fences</b>
<b>succulents</b>	<b>water for wildlife</b>
<b>native plants</b>	<b>desert streams</b>
<b>low-water use plants</b>	<b>desert wildlife</b>
<b>evapotranspiration</b>	

# Understanding the Application Process

## Documentation

When applying for Conservation Certification, you will provide documentation of the planning, implementation, maintenance and monitoring of your desert project. The following is required documentation for desert projects; however, you may also submit additional supporting materials.

**Map/image** of the project area, showing the relative size and approximate location of the project (other relevant information can be shown in the map as well, but is not required)

**Photographs and/or videos** that depict the progress of the project implementation and management.

**Maintenance plans** that demonstrate appropriate activities that meet the needs of the habitat to fully support the target species and support the conservation and education objectives.

**Monitoring logs** that show the frequency, type, and results of monitoring of the project, whether in an informal manner or a scientifically rigorous manner.

**Planting plan** that shows the project has been designed for success. Recommended items to include in the planting plan are:

- Appropriate siting of the project
- Site and regional appropriateness – what is the reference system, soil information, and/or local expertise used to choose the species list?
- Intended or actual planting list
  - Name of plant (genus and species)
  - Bloom time
  - What species it attracts and what habitat function it provides
  - Where the seed or plants came from – transplanted from a nearby location, other desert area, locally-collected seeds, or commercially available seeds/plants
- Technological intervention where appropriate for irrigation or other habitat improvements
- Educational features such as signage and trails
- Any additional steps taken to ensure success of the implementation, such as soil tests, soil prep, revision of the plant list by a technical expert, etc.

**Updated plant list/survey** that lists all of the plant species currently known to occur in the desert, including common and scientific names and whether the plant species is native.

## Application questions

As you complete the application online, you will be asked the following questions about your desert project. These questions will help us understand and evaluate your project.

	Question	Why this question is important
<b>Objective</b>	What are the project's conservation objectives?	<i>Having a conservation objective is a requirement for certification.</i>
<b>Overview</b>	What is the total size of the desert habitat managed for this project?	<i>This provides us with a description of your project to allow us to assess it.</i>
	Describe the habitat in general including plants and structures.	
	Give a brief description of the vegetation types found in the habitat and list several of the common plant species.	
	Briefly summarize activities taking place to manage the targeted habitat.	
	Upload a map showing the location and photos showing the desert habitat.	
	When did work on the ground begin?	



	Question	Why this question is important
<b>Habitat Creation or Expansion</b> <i>continued</i>	Give a brief description of the vegetation types found in the habitat and list several of the common plant species.	<i>For desert habitat, size and location are important factors that determine success and ecological benefit.</i>
	Upload a dated list of current plant species in the desert habitat including common and scientific names and whether the species is native to the region.	
	Is this a new project not presented in previous applications?	
	Does it replace a habitat with less ecological value?	
	Describe the habitat prior to your project.	
	Describe any design or plant selection considerations that were part of this new project.	
	Describe how you sourced your seeds or plants.	
	Upload documentation of the specific considerations.	
	Since the last application, have you expanded the size of your desert habiyay or the area being managed?	
	What is the size of the desert habitat that has been added since the last application?	
	Does the expansion replace a habitat with less ecological value?	
	Describe the habitat present prior to your project.	

	Question	Why this question is important
<b>Habitat Creation or Expansion</b>	Describe any design or plant selection considerations that were part of this project expansion.	<i>For desert habitat, size and location are important factors that determine success and ecological benefit.</i>
	Describe how you sourced your seeds or plants.	
	Upload documentation of the specific considerations.	
	What is the size of the area that is being newly managed since the last application?	
	Describe any water conservation measures integrated into the new or expanded habitat.	
	Upload documentation of these measures.	
<b>Management</b>	How is the area maintained as a desert habitat?	<i>Appropriate management policies and practices are also important to the target species.</i>
	Describe the steps taken to maintain the project.	
	Provide a timeline of maintenance and other completed activities.	
	Upload documentation of these activities.	
	Does the project area include any recreational areas, structures or disturbed areas?	
	Describe steps taken to minimize disturbance and fragmentation by structures or activities.	

	Question	Why this question is important
<b>Monitoring</b>	Was baseline data collected for this project?	<i>Monitoring is essential to understand the impact of the project and to be able to adapt the project develops.</i>
	Describe the types of baseline data collected.	
	Upload the baseline data.	
	Select each type of monitoring that is being carried out.	
	List each type of monitoring, including the frequency and list any plans or protocols used.	
	Upload the monitoring protocols, if applicable.	
	Upload the monitoring data and any analysis, if applicable.	
	Provide a brief summary of results from monitoring.	
	Evaluate the success of the project. If there were any concerns, what are the plans to address them in the future?	
<b>Employee Participation</b>	Do employees actively contribute to the project?	<i>Employee participation can strengthen a project and secure its future.</i>
	How many employees participate in the project on a regular basis?	
	Describe how employees are involved in this project.	
	How many employee hours were spent on the following activities each year?	

	Question	Why this question is important
<b>Other Participants</b>	Do any groups or individuals outside of your company actively contribute to the project on a regular basis?	<i>It is not always possible to recruit outside groups to a project. Conservation and education partners can strengthen a project and provide different audiences to use it for lessons or recreation, thus broadening its reach.</i>
	Select the types of groups.	
	List the names of the groups you work with.	
	Describe their involvement in this project.	
	How many hours were spent by the groups on the following activities each year?	
	If you work with a desert specialist and have a current letter of support from them, upload it here.	
	List additional sources of technical advice (e.g. website, guidebook, etc.) and describe how they were used.	
<b>Regulatory Requirements</b>	Are any aspects of the project done in relation to regulatory requirements?	<i>Going beyond compliance is a requirement for certification.</i>
	Explain how the project exceeds requirements.	
<b>Connectivity</b>	Does the project connect with other desert habitats on neighboring land?	<i>Connectivity on-site and across fence lines helps to decrease fragmentation, one of the leading causes of habitat loss.</i>
	Describe how the project connects with the other desert habitats.	
	Describe any coordinated management efforts with other desert habitats.	

	Question	Why this question is important
<b>Alignments</b>	Does the project align with any larger scale initiatives? (e.g. corporate strategy, regional conservation plan, migratory pathway, watershed plan, etc.)	<i>Aligning conservation efforts with large-scale conservation plans and other regional conservation initiatives allows a site-based activity to support a landscape-scale objective.</i>
	Is the project part of a corporate level commitment to desert habitats?	
	Upload documentation of your corporate commitment to desert habitats.	
	Does the project align with an existing conservation plan or other large-scale initiative?	
	List the conservation plans or other large-scale initiatives the project aligns with and provide website links, if available.	
	How does your project align with these large-scale initiatives?	
<b>Existing Certifications</b>	Does this project have third party desert related certification?	<i>Other certifications or recognitions illustrate strong efforts and commitments.</i>
	List the certifications and provide a website link if available.	



## Content development for Conservation Certification

To inform the development of Conservation Certification, WHC analyzed the projects it was recognizing through its certification program to assess whether they were aligned with contemporary conservation and education priorities.

Following this assessment and using information from it, WHC convened Advisory Committees around many of the conservation and education themes to develop the content that would guide practitioners and applicants in the future. Some themes, including desert projects, that have not yet been informed by external stakeholders, are presented to allow applicants to receive recognition. WHC plans to have all themes informed by stakeholders.

More information can be found about this process in the “Our Impact” section of [wildlifehc.org](https://wildlifehc.org), under “Commitment to Transparency.”



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The WHC Strategy and Planning team can help you build a successful project by identifying needs, making connections with partners and resources, and providing strategies that meet business and conservation goals. Contact us today.

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Every act of conservation matters.

