

# A Rephotographic Survey of Landscape Change and Persistence for the Greater Phoenix 2100 Project

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## Abstract

CAP-LTER scientists and other researchers have made substantial contributions to the understanding of changes occurring in metropolitan Phoenix using techniques such as remote imaging interpretation and on-site environmental data collection. Their research findings typically have been presented in text, cartographic, or tabular form. Because landscape photography more closely approximates our lived experience in the environment, it has the capacity to make more accessible to the public and policy makers many of the ideas the scientific community is exploring. Ground based repeat photography is a readily comprehensible complement to the other communicative tools planned for the Greater Phoenix 2100 (GP2100) effort. This rephotographic survey of landscape change and persistence will provide a public interface for GP2100, thereby helping to achieve that project's objective of informing the decision-making process.

This survey will use repeat photographs of both historic and newly chosen sites to integrate cultural landscapes into the science that will inform GP2100. This pilot study will include a number of historic images for rephotography. It will also incorporate a set of new locations to be rephotographed at regular intervals. The resulting images will be archived and made accessible to those affiliated with GP2100 and the general public. Scientific advisors to this study, representing perspectives in several disciplines will be crucial to its success. These advisors will assist with site selection and interpretation of the resulting photographs for a general audience. This collaboration between photographers and life, earth, and social scientists thus has the potential to communicate powerfully the concerns of the CAP-LTER community to area residents concerned about the future of metropolitan Phoenix.

## Intellectual Merit and Broader Impacts of Research

Rephotography has a history of practical and theoretical uses in both the sciences and the arts. It is an established technique among life and earth scientists seeking to understand and document environmental change and stability. This pilot project distinguishes itself from previous studies by examining ecological transformation and persistence in an urban setting experiencing rapid growth at a combination of historic and contemporary sites. Concise and systematic rephotography of an urban setting has not been attempted on the scale we envision, nor has it been used with the context of a larger project to visualize changes from multiple perspectives.

**This study is an effort to integrate expertise in the environmental sciences with the fine arts to create a distinctly new product, one that links the past with the present in order to consider the future.** In concert with other planned GP2100 products, it has the potential to help researchers, the public, and policy-makers gauge and understand change in the local landscape, particularly metropolitan Phoenix's relationship with its biophysical and cultural environments.

## Objectives

- To illuminate urban landscape evolution using rephotography of existing and new sites
- To provide a conduit for the concerns of the scientific community to reach a general audience. This rephotographic survey can thus complement other GP2100 tools in raising public awareness

## Approach

- Consult with researchers to identify themes, sites, and historic photographs that illustrate the challenges facing metropolitan Phoenix
- Investigate extant archival repeat photography studies
- Carry out technically precise, ground-based rephotography
- Produce prints ready for exhibition/publication
- Consult with advisors to produce interpretive text to accompany the photographs

## Sample Rephotography



## We Need Your Input!

**We need your input in order for this project to succeed!** It can serve as a conduit for conveying the environmental knowledge created by the CAP-LTER community to a wide audience, but only with your participation.

**Besides general feedback about the project, we need the following specific information from CAP-LTER scientists:**

- Identification of key issues facing Phoenix over the next century
- Recommended phenomena, sites, and intervals for rephotography
- Locations of photo collections created and/or used in the conduct of your research around Phoenix
- Interpretive text to accompany completed photographs

**With a minimal investment of your time, together we can create a product that can help Phoenicians make better informed choices for their future. Please contact us for more information.**

Thanks!

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These four images represent potential rephotography sites for this survey, in this instance, illustrating the Valley's changing relationship to water as revealed in the landscape. The left set are of the Salt River immediately west of the Mill Avenue bridge. The pair on the right is of the Arizona Falls at 56<sup>th</sup> St. and Indian School. These photographs bear witness to the dramatic landscape change in the intervening decades. Equally stunning alteration has taken place since the bottom set were photographed in the 1990s, making these strong prospects for powerful rephotographic study. Tempe Town Lake now fills the Salt River and additional development lines the shores. At the Arizona Canal site, SRP and the City of Phoenix are radically modifying the canal banks and building an integrated hydroelectric plant and interpretive structure intended to provide recreational and educational opportunities in addition to electricity.

**By linking contemporary landscapes to our historic interactions with the environment, repeat photography of sites like these can help researchers, area residents, and policy makers consider the consequences of today's choices for the future.**