



## 2022 AICAD/NOAA Fisheries Art+Science Fellowship Application Guidelines

### **About the AICAD/NOAA Fisheries Art+Science Fellowship**

The AICAD/NOAA Fisheries Art+Science Fellowship is a grant to support a 9-month engagement, up to five-years post-graduation, for an artist/designer with a professional Bachelors or Masters degree including BFA/BDes/BArch or MAF/MDes/MArch from any US member school within the AICAD consortium. Participating member schools can be found at <https://www.aicad.org/about/>. The Fellow will be expected to produce artistic and/or design work in response to a specific concern or “challenge” presented by NOAA Fisheries. The selected artist/designer will be part of an interdisciplinary body of researchers, staff, and community groups addressing a specific ecological issue, defined as the “challenge” below.

The successful candidate will complete a 6-week residency embedded with NOAA staff during June-July 2022 in the West Coast Region, followed by a six-month period from August 2022 to February 2023 in their home location to research, produce, and distribute creative work in response to the scientific and policy issues the artist/designer will be exposed to. Consideration of the experience as an open-ended artistic response with the option for multimedia practice, including but not limited to performance, print, painting, video, installation, social engaged art practices etc, and some combination of design and/or design communication can be expected of the Fellow. The Fellow will be expected to present a formal artist talk, produce some written materials, and document their experience and process. Potential publication of the artist's work and written experiences is anticipated. Specific communication materials will also be developed in collaboration with NOAA Fisheries communications team.

The AICAD/NOAA Fisheries Art + Science Fellowship aims to provide a hands-on opportunity for a recent graduate to apply their art & design education in addressing and communicating ecological and social concerns, and bridge communities around challenging resource issues. Potential outcomes will include public talks at various locations including: galleries and museums; educational settings including schools and colleges; and science/policy and art/design conferences. Work produced by the artist fellow in response to the described dilemma may be shown to the public in gallery settings or alternative artistic venues and NOAA Fisheries offices and headquarters.



## ASSOCIATION OF INDEPENDENT COLLEGES OF ART + DESIGN

Documentation of the work and process as well as final finished work will be distributed through digital and print media and reach a variety of audiences including the national art & design and scientific communities, and the public at large. In the words of NOAA Fisheries administrator:

*“The Art + Science fellowship benefits NOAA Fisheries and our mission not only through the beautiful and moving artistic pieces that are generated and which we can use to communicate the value of the work we do for years to come, but it helps our staff see their work in new and different ways, and helps us to connect more deeply with the communities we serve with our natural resource work.”* - Ruth Howell, Branch Chief for Communications and External Affairs, NOAA Fisheries West Coast Region

### **About NOAA Fisheries**

NOAA Fisheries is the federal agency responsible for stewardship of the nation’s ocean resources and their habitat. On the West Coast, NOAA Fisheries focuses on recovering endangered salmon and steelhead species, protecting marine mammals, and managing ocean fisheries. Through our activities in Washington, Oregon, Idaho and California, we work with numerous agencies, organizations and citizens to promote science-based activities that sustain our marine resources.

NOAA Fisheries looks forward to hosting the artist selected in this competitive and prestigious fellowship. The agency is committed to mentoring the artist/designer, and will do so in part by connecting them with scientists, resource managers, and other community members to provide research and community engagement opportunities and set the stage for a successful project. NOAA employs a wide array of science, technical, and communications expertise which will be made available to advance the project as needed, such as data collection and analysis, media relations, economists, social scientists, policy analysts, videographers, etc.

The AICAD/NOAA Fisheries Art+Science Fellowship builds on the five-year relationship with the Pacific Northwest College of Art (PNCA) from 2013-2019 and aims to continue the successful production of artistic work through art and science collaboration at the national level.

### **About the Association of Independent Colleges of Art and Design (AICAD):**

AICAD – the Association of Independent Colleges of Art and Design – is a non-profit consortium of leading art schools in the US and Canada. Founded in 1991, the mission is to help strengthen the member colleges individually and collectively, and to inform the public about these colleges and the value of studying art and design. AICAD colleges educate more than 50,000



undergraduate and graduate students each year, plus many thousands more in summer and continuing education programs. Students are drawn from all 50 US states and more than 60 foreign countries.

## The Challenge

Connecting communities through art to restore salmon populations, create opportunities for people to connect with nature, and address historic injustices

*Consider: As an artist/designer, can you imagine ways to engage communities to support conservation and recovery of urban and suburban salmon habitat in coastal California? How can you convey the importance of these corridors that link the ocean to the natal headwaters of NOAA's trust species?*

### **Overview**

Natural streams once braided the landscape bridging coastal floodplains and estuaries to the headwaters of river systems. Now, river networks throughout the world are under increasing pressures from urban and suburban development ([Feist, et.al. 2017](#)). The 2010 U.S. Census Bureau listed 125 California cities with populations ranging from 10,000 people in small cities to over 12 million people in Los Angeles, Long Beach, and Anaheim combined. Many of these cities grew around rivers that once housed healthy salmon and steelhead populations. This increased concentration of people brings infrastructure that destroys natural habitat, significantly expands impervious areas, and increases toxic stormwater runoff. Many salmon populations that once [relied on these streams](#) as vital corridors for both up and downstream migration are now listed as threatened or endangered under the Endangered Species Act.

Adult fish use these streams to migrate upstream through the urban landscape to get to the high quality [spawning](#) habitat found in the upper river systems. Juveniles follow the same path but head downstream, in the river, out to the ocean. Along with providing a migration corridor, fish benefit from a myriad of ecological processes found in and along the banks of rivers. Rivers have [three distinct habitat areas](#) that accommodate the different life histories of fish. All early life stages of fish (i.e., eggs, alvin, fry, smolts) use the gravel beds, riparian zones and floodplains found in a river to rear in during the first year or so of their lives until they migrate out to the ocean typically at 1-year of age, as smolts.

Urban development modifies the production and delivery of runoff to streams and the resulting rate, volume, and timing of streamflow. This in turn alters the [hydrologic cycle](#) by increased frequency of high flows, redistribution of water from base flow to storm flow, increased daily variation in streamflow, and reduction in low flow ([Konrad, et.al., 2005](#)). In particular, for streams that are tributaries to San Francisco Bay, reduced population sizes and habitat fragmentation caused by



intense urbanization and water resource development have also led to a loss of genetic diversity in these populations ([Coastal Multispecies Recovery Plan 2016](#)).

The selected fellow will work with NOAA Fisheries West Coast Region's California Coastal Office to connect with communities to support recovery of seven listed salmon native to the coast of California:

- California Coastal Chinook (threatened)
- Southern Oregon Northern California Coast Coho Salmon (threatened)
- Central California Coast Coho Salmon (endangered)
- Southern California Steelhead (endangered)
- South Central California steelhead (threatened)
- Central California Coast Steelhead (threatened)
- Northern California Steelhead (threatened)

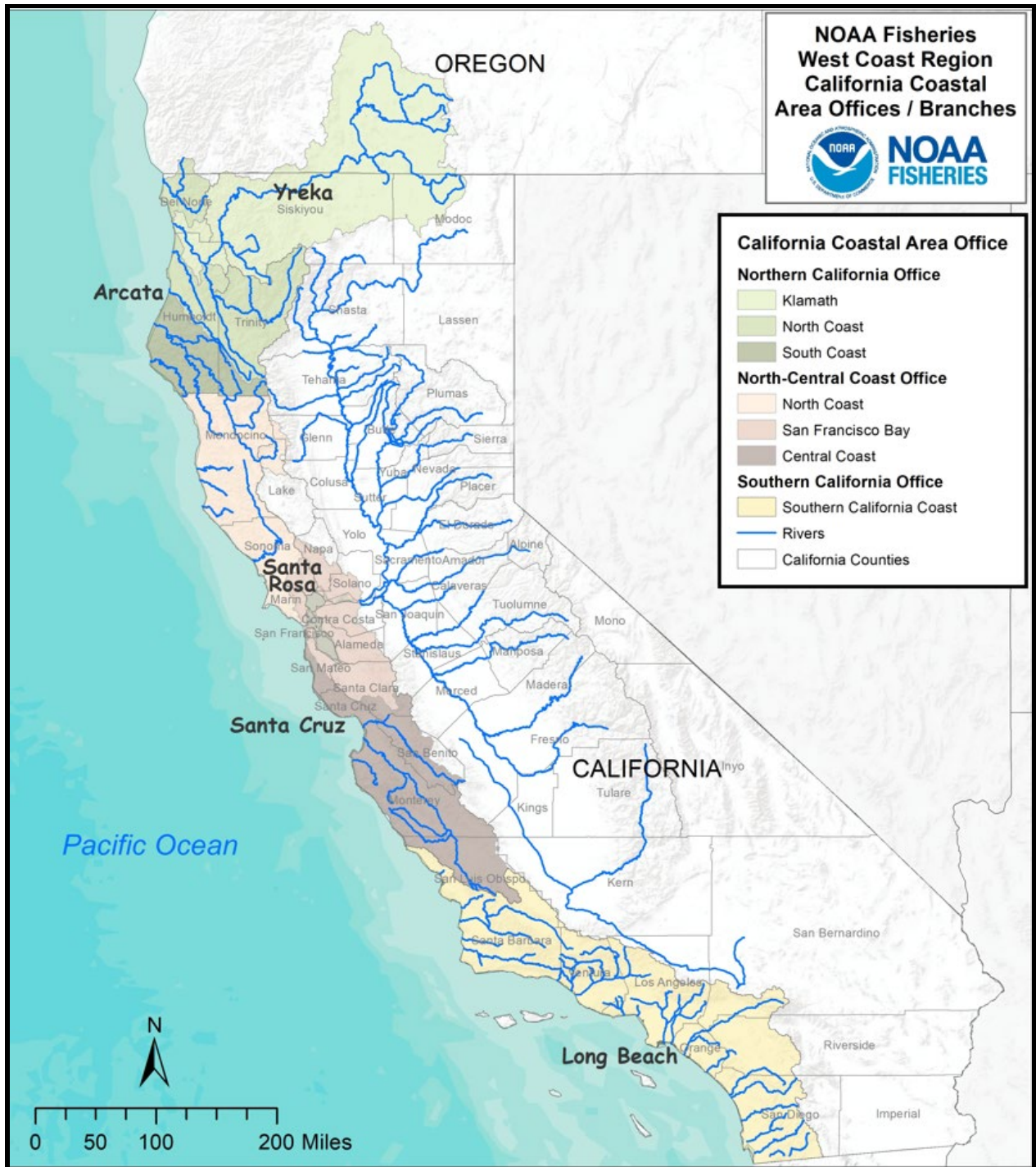


Figure 1 - The geographic scope of this project corresponds with the NOAA Fisheries West Coast Region's California Coastal Office and includes coastal California urban areas like San Francisco Bay, greater Los Angeles, Santa Barbara, Cruz, etc.



Figure 2 - USGS Drawing by Frank Ippolito, Production Post Studios

<https://pubs.usgs.gov/gip/143/pdf/GIP143.pdf>

This image depicts a stream meandering through the landscape before development on the left, and a developed stream on the right showing a channelized system to accommodate the activities and infrastructure believed necessary for an urban city to function.





Photo 1 - Before and after photos of a restoration project changing an urbanized stream back into a more naturalized system where the natural hydrologic and ecological processes can function. Wildcat Creek at Davis Park, City of San Pablo.

Credit: Restoration Design Group



Photo 2 - Marsh Creek Restoration at Creekside Park, City of Oakley

Credit: Restoration Design Group

### *[Why Do Salmon and Urban Salmon Habitat Matter?](#)*

Wherever you live, there's a creek or stream near you. The eighty percent of Americans who live in metropolitan areas are often unaware of the network of urban creeks --- many teeming with life --- that weave through our cities and towns ([USGS Website](#)). Healthy salmon and steelhead populations provide significant economic benefits. Entire communities, businesses, jobs and even cultures have been built around the salmon and steelhead of California ([Executive Summary](#)).

Many urban streams run through impoverished and marginalized communities. Bullar (1990) presents marginalized communities as being paths of least resistance so that they become targets for environmental waste sites or other kinds of environmental degradation. In many cases, these urban waterways have been historically industrialized, subject to water pollution, storm water flows with attendant flooding, and physically inaccessible to nearby urban residents. It is an environmental injustice that these same urban residents have been forced to live adjacent to high flooding risk and water-polluted areas, while also being denied any greenspace benefits from such urban waterbodies ([Smardon 2019](#)).



Figure 3 - *Art by Ray Troll. Poster design by Karen Lybrand. Technical advice by Southwest Fisheries Science Center and Monterey Bay National Marine Sanctuary. Produced by Sea Studios Foundation with funding by the National Marine Sanctuary Foundation.*

#### *How Does NOAA Fisheries Help Salmon?*

From floodplains to estuaries, nearshore habitats to kelp forests, urban waterways to rural streams, NOAA Fisheries (NOAA) is responsible for the stewardship of our nation's living marine resources and their habitats (NOAA WCR Website).





[NOAA](#) is the federal agency under the Endangered Species Act responsible for protection, conservation, and recovery of endangered and threatened marine and anadromous species, including salmon and Southern Resident killer whales.

NOAA Fisheries has a special role in protecting and restoring nearshore habitat because it is so important to species listed under the [Endangered Species Act](#). It is also crucial for fish stocks important to commercial, recreational, and tribal fisheries managed under the [Magnuson-Stevens Act](#). We review actions by other federal agencies that affect nearshore habitat and help them find ways to offset, or mitigate, the effects of those actions.

NOAA Fisheries also supports salmon habitat restoration through its [Restoration Center](#) and by administering the [Pacific Coastal Salmon Recovery Fund](#). These programs invest millions of dollars a year in restoring nearshore habitat, especially in estuaries that are especially important to Puget Sound Chinook salmon. We work with partners, such as the [National Fish and Wildlife Foundation](#). We also use the latest science to focus restoration funding where it will do the most good for Southern Resident killer whales.

#### REFERENCES:

[Coastal Multispecies Recovery Plan \(Volume I of V\)](#)

[Executive Summary for Coastal Multispecies Recovery Plan](#)

[Southern California Steelhead Recovery Plan](#)

Fiest, [Blake E.](#), [Buhle, Eric R.](#), Baldwin, [David H.](#), Spomberg, [Julann A.](#), Damm, [Steven E.](#), Davis, [Jay W.](#), Scholz, [Nathaniel L.](#), Roads to ruin: conservation threats to a sentinel species across an urban gradient, October 2017 <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.1615>

Konrad, C. P. and D. B. Booth. 2005. Hydrologic changes in urban streams and their ecological significance. In: Brown, L. R., R. H. Gray, R. H. Hughes, and M. R. Meador (eds.). Effects of Urbanization on Stream Ecosystems. American Fisheries Society Symposium. <https://pubs.er.usgs.gov/publication/70028019>

[NOAA Fisheries West Coast Region Website](#)

Smardon, Richard; Moran, Sharon; and Baptiste, April K. (2019) "Revitalizing Urban Waterway's Community Greenspace: Streams of Environmental Justice," Proceedings of the Fábos Conference on Landscape and Greenway Planning: Vol. 6 , Article 19. Available at:

<https://scholarworks.umass.edu/fabos/vol6/iss1/19>



Trice, Amy, Daylighting Streams: Breathing Life into Urban Streams and Communities, American Rivers, 2016. [https://www.americanrivers.org/wp-content/uploads/2016/05/AmericanRivers\\_daylighting-streams-report.pdf](https://www.americanrivers.org/wp-content/uploads/2016/05/AmericanRivers_daylighting-streams-report.pdf)

[USGS Website](#)

GENERAL RESOURCES:

San Francisco Bay Restoration Authority

<https://www.sfbayrestore.org/>

San Francisco Estuary Partnership

<https://www.sfestuary.org/ccmp/>

California Urban Streams Partnership

<https://www.californiaurbanstreamspartnership.com/>

Salmon Superhighway - connecting communities one fish at a time

<http://www.salmonsuperhwy.org/>

Southern California Steelhead Recovery Plan 2012

<https://www.fisheries.noaa.gov/resource/document/southern-california-steelhead-recovery-plan>

Final Coastal Multispecies Recovery Plan for California Coastal Chinook Salmon, Northern California Steelhead and Central California Coast Steelhead

<https://www.fisheries.noaa.gov/resource/document/final-coastal-multispecies-recovery-plan-california-coastal-chinook-salmon>

USGS Stream Ecosystems Change with Urban Development

<https://pubs.usgs.gov/gip/143/pdf/GIP143.pdf>

[An Incredible Journey](#) Salmon Curriculum for Middleschoolers

[Life Cycle of Pacific Salmon \(video\)](#)

2018 09 Community Engagement Development

<https://drive.google.com/file/d/1em51a1PrTXAcyfUt8RUiDOLHvMcnEkpp/view?usp=sharing>

Equity assessment report 09.17.2019.pdf

[https://drive.google.com/file/d/1o\\_nOEcabVfaqsX9dz\\_giF5ALt92YQrr/view?usp=sharing](https://drive.google.com/file/d/1o_nOEcabVfaqsX9dz_giF5ALt92YQrr/view?usp=sharing)



[Incorporation of Equity Recs.pdf](#)

[https://drive.google.com/file/d/1m9Hz\\_z8fnPv4fxxPjWDNkHqFYCd3k3aw/view?usp=sharing](https://drive.google.com/file/d/1m9Hz_z8fnPv4fxxPjWDNkHqFYCd3k3aw/view?usp=sharing)

[JEDI Guidelines FINAL \(2\).pdf](#)

[https://drive.google.com/file/d/1J7tnBiCqj2QX8pIOXI8zEYhHx\\_nGJhp8/view?usp=sharing](https://drive.google.com/file/d/1J7tnBiCqj2QX8pIOXI8zEYhHx_nGJhp8/view?usp=sharing)

[Short & Long term Recommendations in benefit of economically disadvantaged communities.pdf](#)

[https://drive.google.com/file/d/1liY8ydZ0MG7-xAgy49Cx-LnPDn\\_JVE8W/view?usp=sharing](https://drive.google.com/file/d/1liY8ydZ0MG7-xAgy49Cx-LnPDn_JVE8W/view?usp=sharing)

## Fellowship Expectations

### **Fellowship Expectations:**

The Art+Science Fellow will be expected to:

- Be available and committed to the work for the duration of the placement. This will be six-weeks in Summer 2022 (Approx. dates mid-June to mid-August) as well as continuing to engage in the work through February 2023;
- To produce a body of work responding to your embedded experiences with NOAA Fisheries and specifically addressing the challenge and any agreed upon communication materials;
- Be able to collaborate, engage, and respond to multiple partner groups including working with scientists, tribal members, conservation, industry, the general public, and educational representatives;
- Be able to be self-directed in leading the experience to arrive at your own personal goals as well as meeting the expectations of the fellowship.
- Be interested in the scientific, social, and political dimensions of the West Coast Region community and aquatic and marine environment;
- Be open to learning, researching, participating in field activities, and learning from and engaging with the community;
- Be an effective communicator, responding to emails and communications courteously and promptly. Be willing and able to regularly check-in with NOAA Fisheries staff throughout the Fellowship timeline.
- Document the experience and present the documentation to the scientific community and scientists, artists and the art community as well as the public at large;
- To formally present and write about your experiences;



- To be creative and exploratory and use your practice to improve our ecological future and further NOAA Fisheries mission.
- To manage your budget and funds appropriately to ensure all requirements of the Fellowship are met.

### **Award:**

The Fellow will receive the following fixed award:

\$10,000 Fellowship award

In addition, the following funds will be allocated as reimbursable expenses. Flexibility in the distribution of these funds is expected. The Fellow will be responsible for appropriate budgeting to ensure all expectations are met, including presentation opportunities and associated registration fees for conferences.

\$2000 for board in shared accommodations during the summer residency and access to studio space for the summer 2020.

\$1500 for materials/ documentation.

\$1750 for travel, including conference attendance, artist talks, shows.

### **Outcomes:**

The selected Fellow will be expected to be a self-starter in terms of sourcing information and contacts to realize their work. Mentorship and guidance from AICAD will be available at [noaafellowship@aicad.org](mailto:noaafellowship@aicad.org). The Fellow can be assured that the NOAA Fisheries community of scientists and staff will offer support in terms of information and community resources throughout the process. Potential outcomes of the Fellowship will include public talks at various locations including galleries and museums, educational settings including schools and colleges, and science/policy and art conferences. Work produced by the artist Fellow in response to the described dilemma may be shown to the public in gallery settings or alternative artistic venues and NOAA Fisheries offices and headquarters. Documentation of the work and process as well as final finished work will be distributed through digital and print media and reach a variety of audiences including the national art and scientific communities, and the public at large. The artist Fellow will be expected to pursue opportunities to show and talk about their work and experiences through this fellowship. By way of example of a type of art and science fellowship approach, artist Catherine Ross describes her 2018-19 Art+Science embedded residency at PNCA with NOAA Fisheries here: <https://vimeo.com/335813761> Please keep in mind that multiple creative responses, and ways the experience will be documented and talked about can be imagined and will depend on the Fellow's own practice and interest as they engage with the dilemma and collaborate with NOAA Fisheries in the production of the work.



### **Rights to the Final Work:**

The artist will retain copyright but shall make no exact duplications of the WORK for sale for promotion. The artist will be able to show the final work as part of portfolio development and to exhibit the work but must fully credit AICAD/NOAA Fisheries Art+Science Fellowship

The artist shall grant a non-exclusive license to AICAD, NOAA and NOAA affiliates to copy or reproduce the artwork for the purposes of their mission, including specifically (but not limited to): exhibition and collections catalogues, NOAA and AICAD websites, social media accounts, handouts, brochures, didactic labels, magazines, journals, and newspapers; to transmit or otherwise communicate a display thereof by means of any device or process (examples include but are not limited to slides, film, and television) and to authorize others to do the same, but only on the condition that all such reproductions of said ARTWORK is credited to the artist(s) and AICAD/NOAA Fisheries Art+Science Fellowship

NOAA & AICAD will commit to not modifying the final work without consultation and approval of the artist. In the event NOAA or AICAD wishes to use the ARTWORK for commercial purposes, NOAA or AICAD shall contact the artist so that a separate agreement may be negotiated.

## How to Apply

### **Solicitation of Fellowship Applications:**

Submit the following materials to Slideroom by January 5, 2022. The selection process will be administered by a committee drawn from a national representation of artists and educators as well as NOAA staff to review portfolios and deliberate the merits of the candidates.

All submissions must include the following:

1. **Statement of Intent:** What are you hoping to achieve in this experience?
2. **Write a short, one page response to the following:** How as an artist/designer might you approach this challenge? And why would you make these choices, including methods of documentation of the experience.
3. **A current portfolio of at least six and no more than ten images of work.** Clearly title and caption your work within the application.
5. **Two letters of recommendation.** These should be from colleagues or faculty members familiar with you and your work/process. Not a family member or friend.



**Deadline:**

Applications are due on January 5, 2022

**Application Link:**

<https://aicadgrad.slideroom.com/#/permalink/program/64674>

**Eligibility:**

Any BFA/MFA/ BDes/MDes or BArch/MArch alumni from any United States AICAD member school who has graduated between spring/summer 2017-spring/summer 2022 and who are US citizens are eligible to apply. All disciplines from the eligible degree types are eligible to apply.

## Bibliography:

### GENERAL

Alicia Keefe, Emily Bosanquet & Katherine Cheney. (2017) The Art of Sustainability, Fisheries, 42:5, 250-253, DOI: 10.1080/03632415.2017.1305206  
<https://afspubs.onlinelibrary.wiley.com/doi/abs/10.1080/03632415.2017.1305206>

Christopher X Jon Jensen. (2019) STRAIGHT TALK, Ardis DeFreece: Curiosity at the Intersection Between Art and Science. SciArt Magazine. Vol 35.  
<https://www.sciartmagazine.com/straight-talk-ardis-defreece.html>

NOAA Fisheries Science in the Studio Award:

[https://www.westcoast.fisheries.noaa.gov/education/pnca\\_water\\_quality.html](https://www.westcoast.fisheries.noaa.gov/education/pnca_water_quality.html)

Alina Tugend. "Can Art Save the Planet?" The New York Times. March 12, 2019.  
<https://www.nytimes.com/2019/03/12/arts/art-climate-change.html>

Helicon Collaborative and ARTPLACE (2018). Father, Faster, Together. How Arts and Culture Can Accelerate Environmental Progress. Creative Placemaking Field Scan #4: Environment and Energy. <https://heliconcollab.net/wp-content/uploads/2018/04/Farther-Faster-Together-1.pdf>

[New salmon mural promotes the art of sustainability](#)



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[Community mural inspires salmon conservation in Seattle](#) (pg 25)