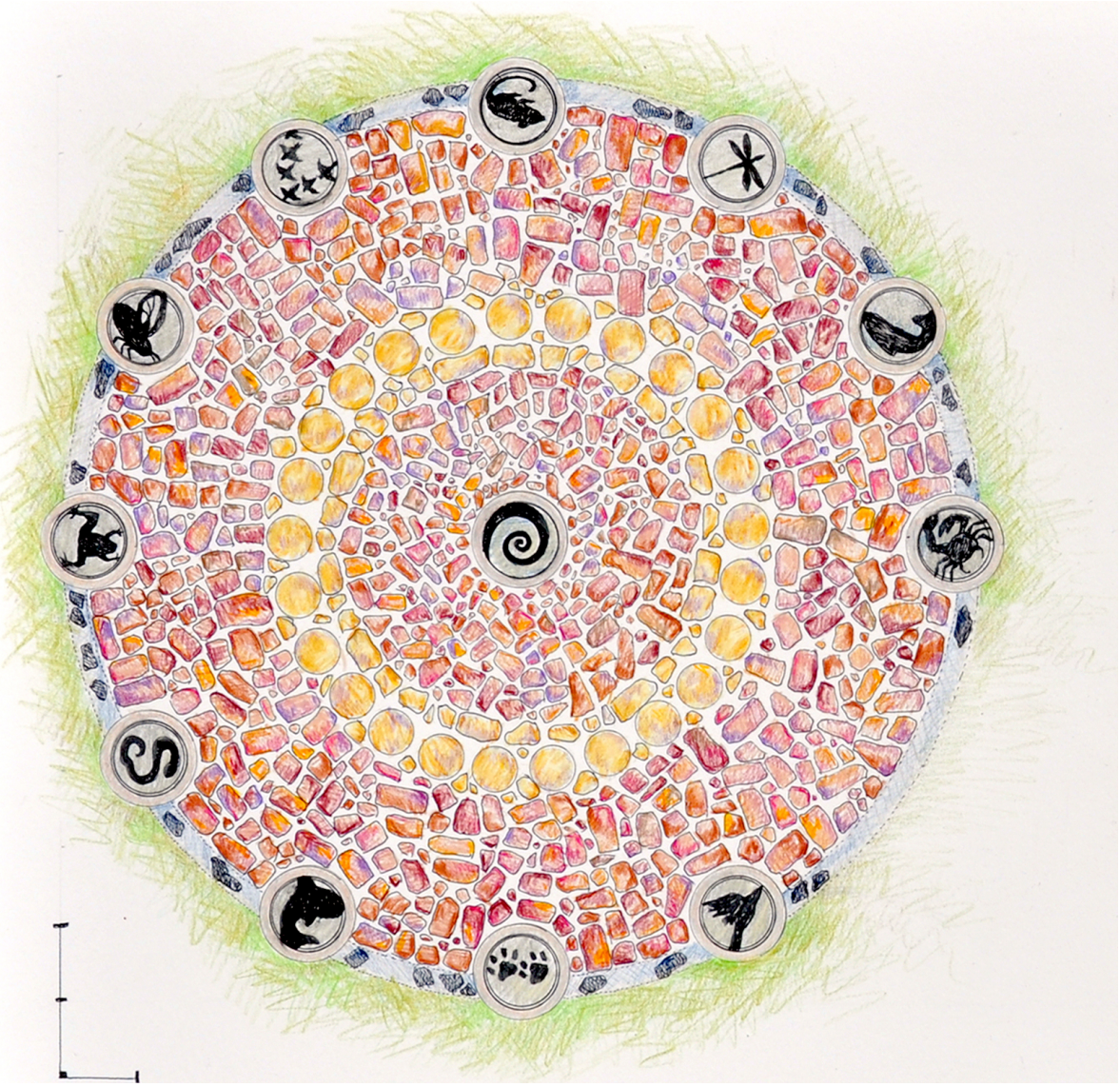
Slow Art at Otter Creek

a manual and manifesto
for artist-initiated ecological remediation
as public artwork



Deanna Pindell (draft edition 2021)

What you'll find in this Manual and Manifesto:

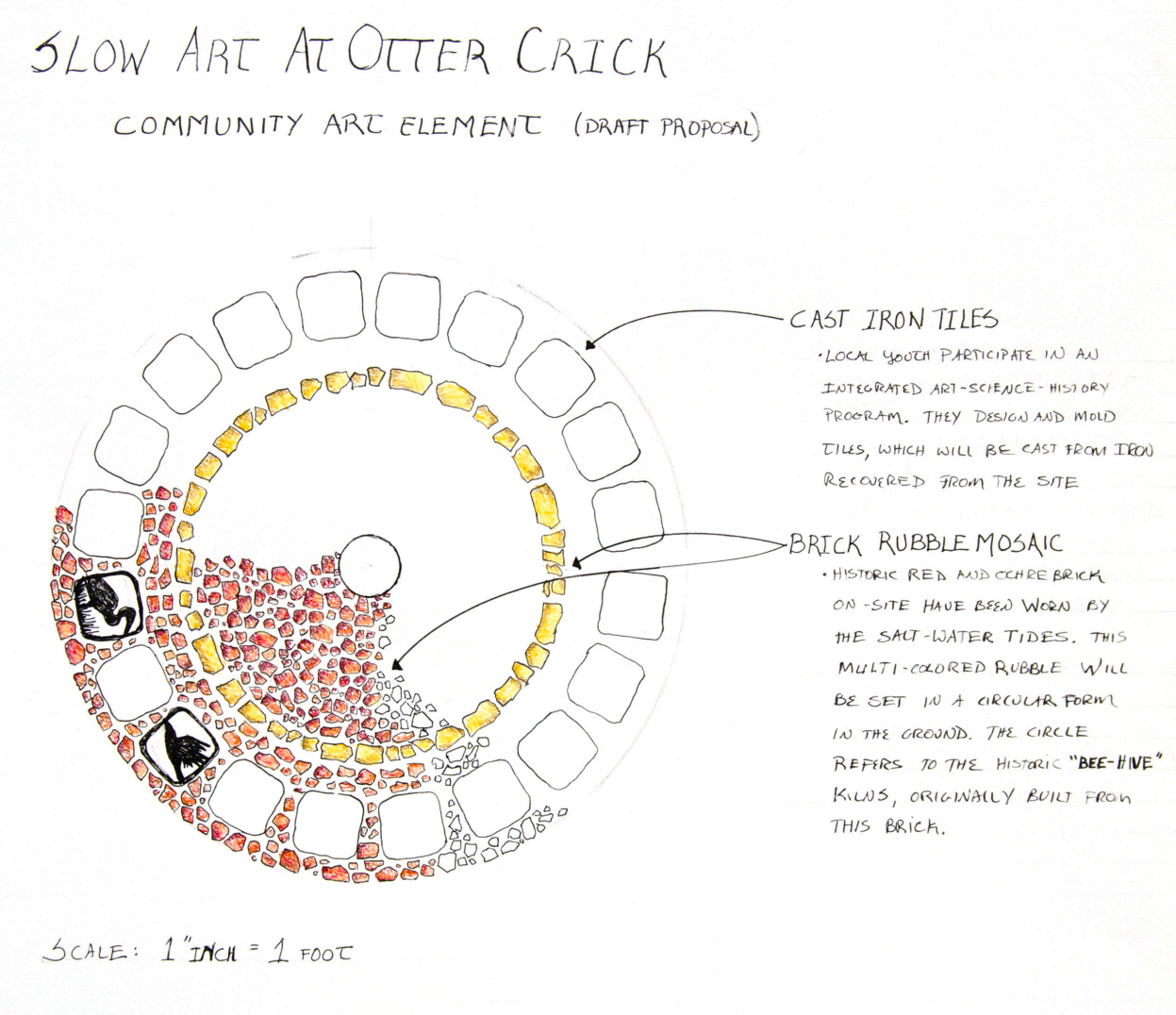
Reflections, Ten years later: 2021

Philosophy and beginnings: 2009 to 2011

Post-thesis work and finish: 2011 to 2013

Links in a Remediation Project:
A guide to Key elements to any Community Project puzzle. 2011

Bibliographic notes



Reflections, Ten Years Later

As artists, we learn to bypass the concept of failure.

The original portion of this booklet was written in 2011 as a section of my Master of Fine Arts thesis in Interdisciplinary Arts at Goddard. Goddard requires a practicum along with the thesis, and this project was perfect with all of the requisite threads of learning and acting,

This brownfield remediation required deep studies of the ecology of the area; study of governmental documents from the DOE and our County; engagement with numerous stakeholder entities and partnerships; deep study of design principles for remediation artwork; and more.

The project was still in progress when I finished the MFA, and I continued with it for two more years. Ultimately, the public art portion of the proposal was never built built, but that doesn't mean the project was a failure. I was able to impact two important aspects of the State's restoration of the brownfield:

1- Discovery of the remnants of the beehive kilns, which I researched and reported. The Historical society was then involved, who documented and decided the fate of the remnants

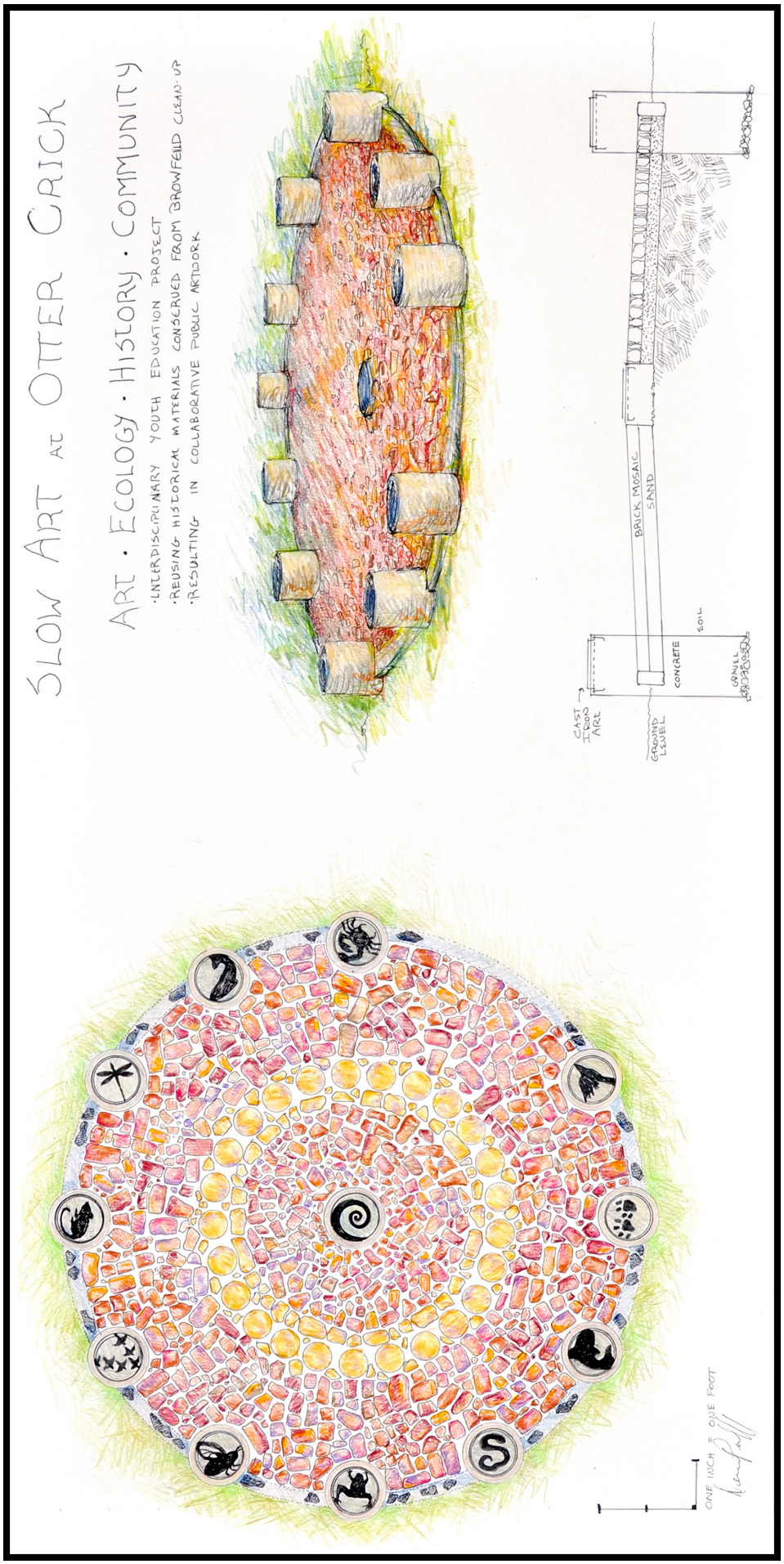
2- Additional area was added to the original DOE remediation plan for this brownfield. The culvert and small stream that had attracted me initially had not been part of the original plan, but were included in the final remediation.

Overall, *Slow Art* was an expansive and interdisciplinary learning project. I've left the original section ***Philosophy and beginnings: 2009 to 2011*** as written, allowing it to be an intimate view inside this artist's process.

This handbook is the one I wish I had had to start with as a graduate student ecoartist. It is deeply informed by the generous writings of earlier ecoartists such as Jacki Brookner, Aviva Rahmani, and Patricia Johansen; public artists such as Lily Yeh; curators and authors such as Sue Spaid, Patricia Watts, Amy Lipton, Lucy Lippard; so many ecology-based scientists, architects, place-makers, freethinkers; groups such as WEAD and ecoartspace; and many other resources. In particular I appreciate three of my Goddard faculty mentors: Sharon Siskin, Ju-Pong Lin, and Seitu Jones.

I hope these notes will be useful to future ecoartists in their own projects.

Final proposal drawing
2013.



Slow Art at Otter Creek

Philosophy and Beginnings: 2009 to 2011

This remediation project first sparked my imagination about three years ago, (2008) as I walked my dog frequently along the Chimacum Creek beach and estuary located in Irondale, Washington. I sought a way to make my sculpture more relevant to the urgency I felt about the ecological challenges facing the planet. I began to envision a project that would remove the iron debris that blocked a tiny spring-fed stream, remove invasive vegetation and replace it with native plantings, and incorporate a community art-project (such as a mosaic) to develop stewardship.

"Slow Art" refers to the pace and process of socially-engaged projects, to which I am (slowly) learning to adapt. Naively, I began my studies at Goddard thinking that I could remediate this culvert in less than six months, in fulfillment of the required practicum project. Instead, I have learned much about the fascinating agencies of twenty-some stakeholder groups, from the State Department of Ecology (DOE), to the dogs who walk their human companions there everyday.

One phase of this extended project became the official "Practicum": the research and writing of a simplified manual for artist-initiated remediation projects. At first, the motivation was purely selfish, to help me plan my own project: I simply couldn't find anything "out there" that could explain to me how to do this! This effort was incredibly useful in helping me to organize the tornado of science, politics, data, creative work, time, and actions in which I found myself immersed.

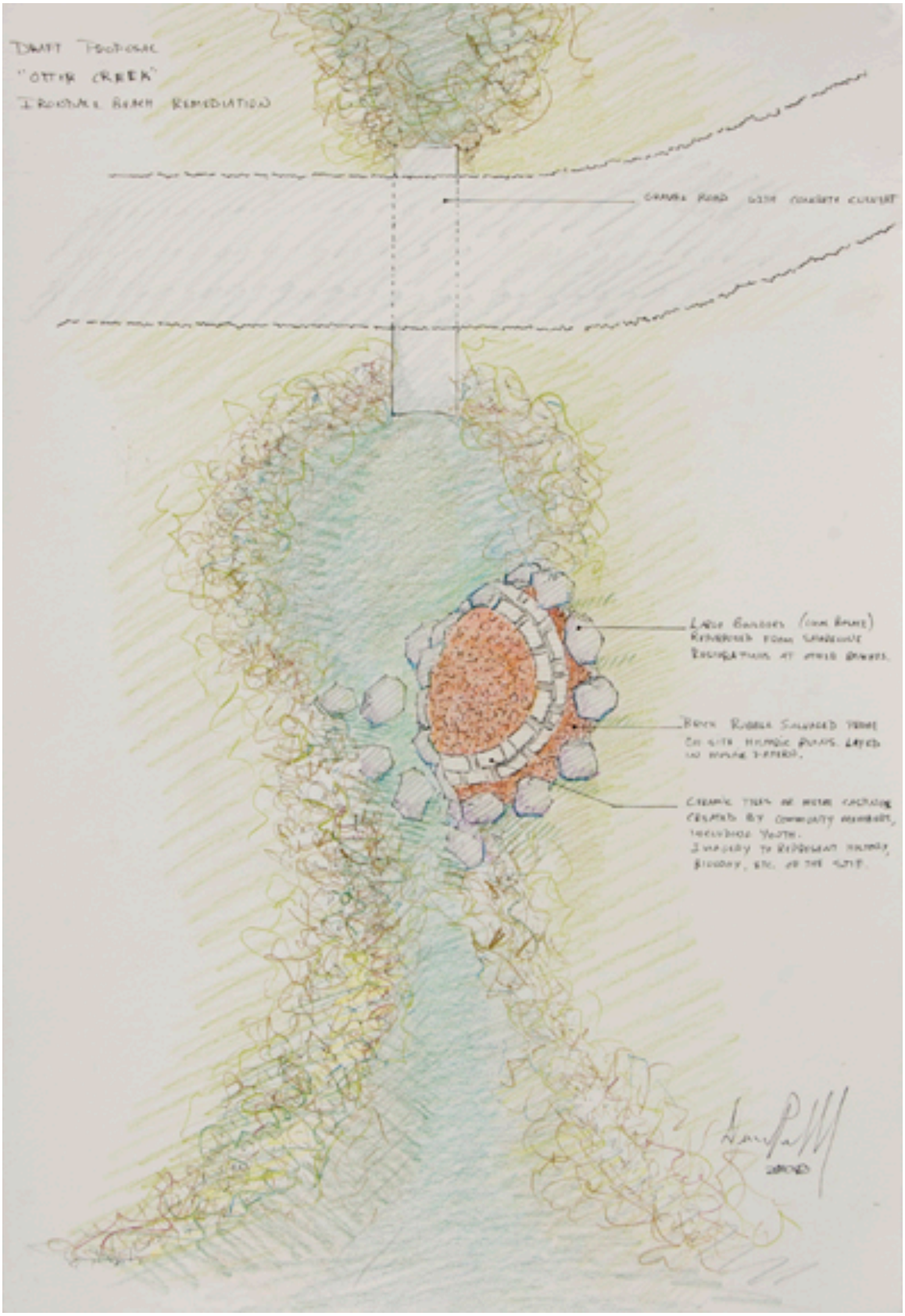
I have successfully drawn attention to this particular remediation need, and have worked to “piggy-back” this smaller element (the spring-fed Otter Crick) into a much larger brownfield remediation (the Irondale Steel Plant site). The maps included in this report show the entire Irondale Steel Plant site, with a variety of types of contamination (petro-chemical and heavy metal). The DOE’s final plan as of 2010 did not include remediation of this year-round spring fed stream, as they determined that the contaminants in the stream did not result from the adjacent brownfield site.

Since that time, Washington State has declared Puget Sound to be a critical water habitat. The State Governor’s office has placed a top priority on protection and remediation of this critical body of water, which is bordered by several large metropolitan areas. In spite of a severe budget crisis, the State legislators found funding for portions of the clean-up and the restoration of the entire Irondale site, and at this last minute the small stream and culvert have been added into the DOE’s overall plan. Another stakeholder organization, the North Olympic Salmon Coalition (NOSC) and their allies in the Chumsortium (a collective of local agencies who are committed to salmon habitat) intend to take over the restoration, so the project is already a success in terms of the restoration of the stream and crick habitat. It is still uncertain whether or not I will ultimately be able to create the community-engaged aesthetic/education project, which I had envisioned as an integral part of the restoration.

Ultimately, I truly consider the entire Slow Art at Otter Crick project, still in progress after three years, to be the fulfillment of my concept. This manual (while technically the Practicum) is but one small phase in a life-changing experience of yet-to-be-determined outcome.

The line between art and life
should be kept as fluid, and perhaps indistinct, as possible.

- Alan Kaprow, artist
artist



First Draft proposal for Slow Art at Otter Crick remediation and art element.

Precisely because
environmental problems are rooted in
cultural practices and ideologies,
it is artists, immersed in world and cultural practices,
who are ideally situated to locate and develop
effective responses.
In fact, we've been doing it for decades.
What is new, is an increasing acknowledgement of
the role of art and artists in bringing about change.

-- Beth Carruthers
artist, philosopher, curator

A Bit of Philosophy:

The field of Eco-Art has been growing as artists become aware of our potential agency. Eco-Art, (a shortened version of Ecological Art), is an incompletely-defined term referring to works that might fall into the general categories of Earth Art or Land Art or Environmental Art, as these categories have been discussed since the 1960's. There is a profusion of related terms and ideas: ecoventions, earthworks, art in nature, restoration art. While there is still debate about the exact definition of many of these terms, the following list from Sam Bower, founder of *greenmuseum.org*, serves well as an introduction to environmental art and eco-art.[1]

Environmental art:

- **Informs and interprets nature and its processes, or educates us about environmental problems**

- **Is concerned with environmental forces and materials, creating artworks affected or powered by wind, water, lightning, even earthquakes**

- **Re-envisions our relationship to nature, proposing new ways for us to co-exist with our environment**

- **Reclaims and remediates damaged environments, restoring ecosystems in artistic and often aesthetic ways**

The realm of Public Art is the ideal location for an explosion of these optimistic and multi-functional works. Wherever people are (or have been), there are also degraded landscapes. Public Art (as opposed to Art in public places) is most often successful when it serves some needs and desires of the Public for whom it was made. Now, we invite the flora and fauna to join the circle of Public and Community, and the venue becomes our planet as a whole.

In many ways this kind of work is tougher, riskier, and often more frustrating for the artist than the typical studio-based practice. Why would anyone want to take it on, especially when the odds can be stacked pretty steeply against the artist's career? I have come to see myself as a cultural worker, and my personal mission is motivated by the urgency and the ethics of ecological work. There is no separation between my work, my art-practice, and my life.

I would say to the people
that they could realize the revolution
if they use the power that they have,
but they have no consciousness of their own power
and therefore we have no revolutions.

Once more the people have the power to change the situation,
but they don't know they have the power.

- Joseph Beuys
artist, activist

Links in the Journey
of a Remediation Artwork

Dear Reader, although these pages offer a set of 21 steps for an artist-initiated project, please don't imagine that a project will proceed in a tidy order! The process for *Slow Art at Otter Crick* has been much more fluid and messy; branching out and re-entangling. Each waypoint is a link in a mycelial network, building on the information and activities and relationships of all the other steps ... previous, present, and future! Often the links must be repeated in multiple layers of depth, with surprising changes in direction and order. Trust the process!

When one tugs at a single thing in nature,
he finds it attached to the rest of the world.

- John Muir
naturalist, writer

♻ Identify a Suitable Place in Need of Remediation

Become familiar with an area. Observe everything: animals, plants, humans, soils, water patterns, geology, history, etc, etc, etc; preferably through each of the seasons of the year.

I fell in love with the Irondale Beach through many seasons of walks, but at first I knew nothing about the ecology, history or needs of the place. This love helped to inspire my studies of the area, leading to my citizen-scientist volunteer work with Beachwatchers and County parks. This love will also be the nourishment I need to continue with this project through the challenges of a long-term remediation project.

The culvert that encloses the spring-fed stream known as Otter Crick.

Identify the Stakeholders and Oversight Agencies

"Stakeholders" include: people who use the area casually, or seasonally or frequently; people who live in and near the area; groups who have vested interests in the area (such as historical societies, environmental or recreational groups). "Oversight agencies" might include federal, state, county, or city agencies, for regulatory, permitting, recreational, or conservation purposes.

I've identified 13 agencies and stakeholders groups, and another 12 groups who are likely to be interested or play a part. Not all projects would have such a wide set of interested parties; but this location has many overlapping interests. It is a county park property within a residential area; a public beach adjacent to to a critical habitat area currently undergoing restoration; on a brownfield site designated for remediation of toxins by the state Department of Ecology.

My first proposed site for an art element.

Write a Proposal.

Several versions of the proposal may be necessary. Each particular audience may have different requirements: a permitting agency needs different information than an arts-granting foundation. A concise summary will be useful along with a more complete explanation. Images are always very helpful!

The versions that I've presented so far, over a year's seasons, include:

Initial official four-page proposal to WSU

Informal Powerpoint to a Beachwatchers Class
citizen scientists and potential volunteers

Expanded powerpoint to mixed group of citizen water-quality volunteers and water-quality researchers

Expanded six-page proposal for a coalition of stakeholders involved in salmon restoration at the site

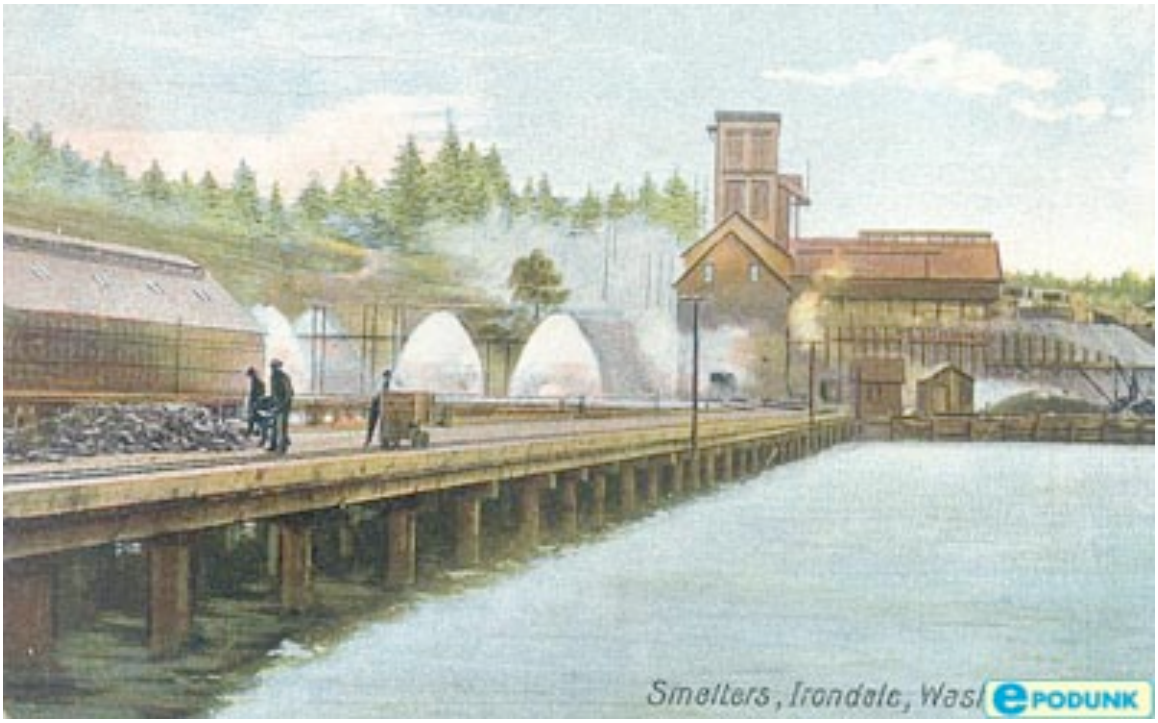
Presentation at County Parks Board, including visual aids (maps) and proposal sketches

Informal on-site presentation to a class of citizen-scientists in-training.

Alice laughed.
'There's no use trying,' she said;
'one can't believe impossible things.'
'I daresay you haven't had much practice,'
said the Queen. 'When I was your age, I always
did it for half-an-hour a day.
Why, sometimes I've believed as many as six impossible things
before breakfast.'"

- Lewis Carroll,
Through the Looking Glass

Rendering of the Irondale Iron and Steel Plant. The white conical forms are the beehive kilns, used to create charcoal for the furnaces.



Learn about the Science

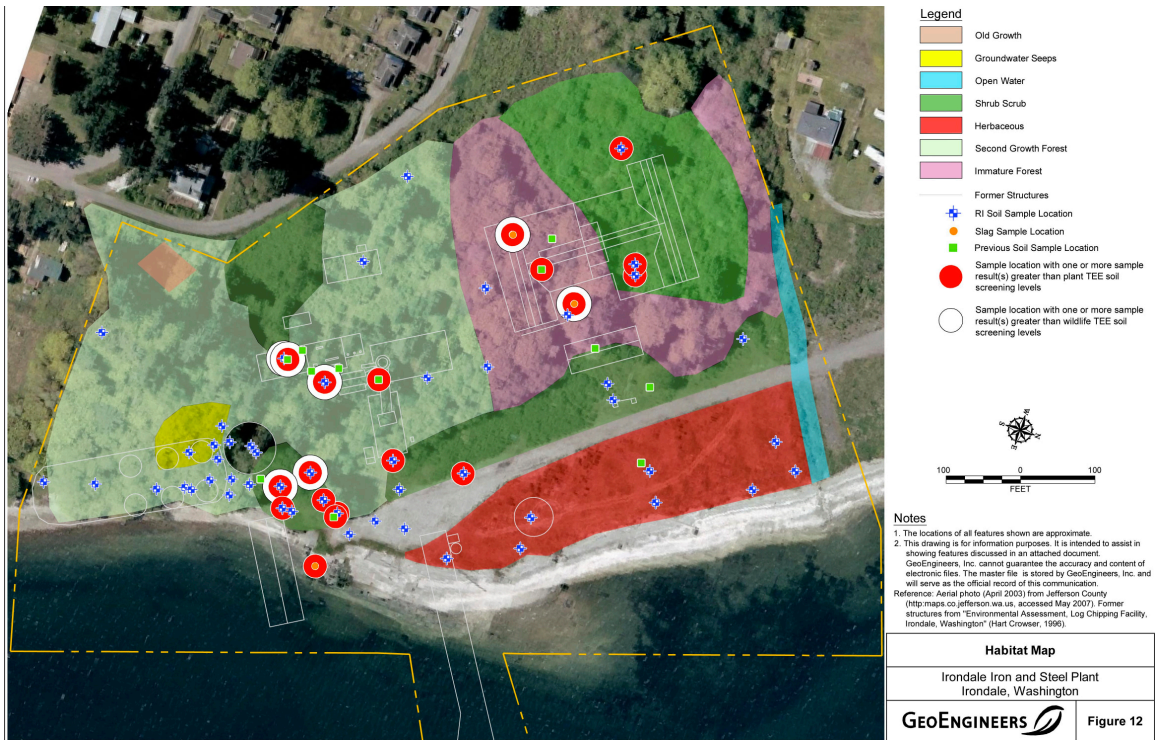
Understanding the ecological sciences allows the artist to identify needs and visualize possibilities for remediation. One needn't understand deep or esoteric organic chemistry or molecular biology to design a useful project; there will be scientists and other experts available to collaborate. However, it is useful to understand the language being spoken.

Absolutely essential! Truthfully, I knew nothing about the science when I first became enchanted with Otter Crick. I waded through tomes of Department of Ecology notes about the site; fortunately the DOE publishes glossaries and FAQ's to guide the public in the "public comment" periods of their projects. A class with the Washington State University's Beachwatcher's citizen-science program gave me a solid foundation for this project and others, including access to experts, scientists, and mentors.

Citizen-science programs are administered by the Land-grant universities (in my state, that's Washington State University). The fee was tiny, only $40 for an excellent "water ecology boot camp". The classes were taught by a number of experts in their fields and relevant to the eco-systems in our region. The goal is to provide training to non-scientist citizens, in exchange for some sort of civic benefit: improving the local economy, helping local farmers, developing a volunteer workforce.

Not only did I learn enormous amounts in the short series of classes, but I met a corps of interesting citizens committed to the environment, was introduced to a multitude of experts and professionals, learned about the political ins-and outs, found myself involved in a variety of fascinating projects and field trips. These are the people who make things happen in our community. A great program by any standard!

Habitat map of Irondale Site, prepared by GeoEngineers. The location of the culvert which I proposed for remediation is in the blue-coded waterway.



Build Coalitions

Develop relationships with the people who can assist and mentor in any phase of the project. Identify common needs and goals. These relationships can be both business-like and personally friendly.

For Irondale, the primary coalitions began through the WSU extension and Water-Quality office; these people are key stakeholders and have many resources and much knowledge. At the same time, these wonderful folks are also over-worked and under-funded. I am gaining their trust by showing up to help with related projects, being reliable, and taking leadership on smaller projects.

I found myself attending a variety of local Friends of the Parks meetings, public commissioner's open-houses, board meetings.

I also made connections with the County Parks Manager. When he told me about a local forestry issue that was on the political chopping block, I stepped up and joined the advocacy movement to save that acreage (he and I shared a love for that bit of land).

CPTED: Crime Prevention through Environmental Design. The CPTED principles depend on an overarching sense that the community cares about a certain area, rather than rigorous law enforcement, to prevent crime. Examples include keeping the area clean and well-maintained: litter is picked up, graffiti and other vandalism are quickly repaired. Good lighting, visibility from nearby homes and clear pathways around shrubbery are also very helpful.

When a variety of people use a space regularly, either to pass through, to relax or to enjoy activities, that space will feel safer. Persons with antisocial intent will go elsewhere.

People often don't realize that public art supports CPTED principles in powerful ways. CPTED is an important value for the parks manager, and law enforcement professionals recognize that CEPTED helps. Often, some community members are opposed to "wasting time or money" on public art. They may be concerned about public health and safety, or ecological issues, or youth engagement, without realizing that Public Art can be designed to address any of these and other issues.

I like uniting diverse groups
— such as artists, scientists, engineers,
city planners, architects,
and a wide variety of cultural and class perspectives —
in order to focus different kinds of intelligences on a problem.

- Betsey Damon
artist; founder of Keepers of the Waters

⚠ Apply for Permits.

Allow plenty of time for this process, and budget for funding the permit fees. Try to enlist mentorship from people who are familiar with the issues; there may be expedient alternatives for remediation projects that match the ecological mission or certain agencies. Emphasize the appropriate and relevant key words for each agency.

In Washington state, there is a permitting process known as "JARPA", which is basically a shortcut, a one-step application that fulfills many requirements. JARPA is designed to simplify the process for citizens and organizations who wish to do restorations, remediations, projects that will enhance habitat for wildlife. In our state, "Salmon" is the magic word: if it benefits salmon, it's a go. Salmon are considered the keystone critter here. Who is the keystone critter in your area?

Robert Davidson. "Every Year the Salmon Come Back". 1983. Davidson is among the most respected contemporary Haida artists. The Haida Nation is based in Haida Gwaii on the Canadian West Coast. Courtesy Spirit Wrestler Gallery.

$ Fundraise.

The budget includes items for which money is a necessity, but it also includes "in-kind" items, which are donations and volunteer time. Fundraising may include grant-writing, seeking private donors, and holding benefit events. It may also may include asking local businesses to donate the use of rental tools or materials, free publicity, temporary workspace or snacks for volunteers.

WSU has been enthusiastic about helping me. It's a win-win, because their program is mandated to bring community involvement, and so if my project is successful then it fulfill their mandate, thus enabling them to secure their own funding in the next state budget go-round. I've learned that many major public projects are fulfilled with money from a variety of sources. I've sat in meeting rooms listening to State bureaucrats and non-profit ecologists negotiate the possibilities for funding a restoration. Collaboration is the norm.

This can be a great advantage in funding eco-art: support may be garnered from both the arts and the environmental sectors. For example, Lorna Jorden's 8-acre Waterworks Gardens was funded with a mix of Percent for Art money and County stormwater-treatment funds.

For this smaller "Slow Art at Otter Crick" project, we projected that some money would come from Salmon-habitat enhancement programs; in-kind equipment use could come from the County's equipment, a private supporter who owned a backhoe, and the local construction supply center. Labor needs would be met through the volunteer forces of

several local organizations with interests in habitat and parks. The local county historical society includes many avid history buffs who would love to help research the site for interpretive signage, and may also be able to find funding for them. Some money might be available from the town's Art Commission, to fund the youth art project; and so on, with local involvement rippling throughout the community.

The remaining foundations of the beehive kilns from the once-active Irondale Steel plant on this site. The State Historical Society will advocate and regulate the preservation of these artifacts for the Irondale site. Local Historical societies are often useful allies for public artists.

Publicize.

Getting the word out will happen throughout the project, and will look different at various phases. Presentations at community meetings, group emails, newspaper press releases, internet social-networking, public access TV or radio, all the way up to national news or international art magazines. It's all about connecting with a larger community.

I certainly used to be shy about publicity. But now, I think of publicity as an invitation to the community, a way of sharing information with people who might be interested in joining us, a way of sending "Good News" into the community. It's also a way of rewarding all the volunteers and partners. People love to see their friends and family in the paper, and the business which support the project will appreciate the public "thank you".

"My own short definition of
public art:
accessible art of any species that cares about,
challenges, involves, and consults
the audience for whom it is made,
respecting community and environment."

- Lucy Lippard
writer, curator

Involve Community.

Develop relationships with community people who want to help. Perhaps they have various kinds of expertise (anything from microbiology to brownie-baking is good!). What can this project give back? Can youth be involved, creating an ecologically-themed art project (a concrete play-sculpture, a ceramic-tiled bench, a mural)?
Maybe folks in a rehab institution would like to do plantings. Science teachers might like to have a hands-on project for their students.

I have met so many different people in the community, through this process. Most of them become so enthusiastic about optimistic projects, and many become excited about the possibilities for the realization of their own dreams for this site or other sites.

The work of the eyes is done.
Go now and do the heart-work
on the images imprisoned within you.

- Rainer Maria Rilke
poet

The site was once a Chimacum Tribe settlement, known as Tsetsibus or C'íc'abus. The estuary supported salmon and shellfish. This tribe was decimated by warring tribes circa 1850, and the few survivors integrated into the Skoskomish. Now the Chimacum Tribe is considered extinct.

It is not enough to repair the landscape;
one must also 'repair the hole in the psyche
which is left when all traces
of biological and ecological roots
are obliterated.'

- Alan Sonfist
artist

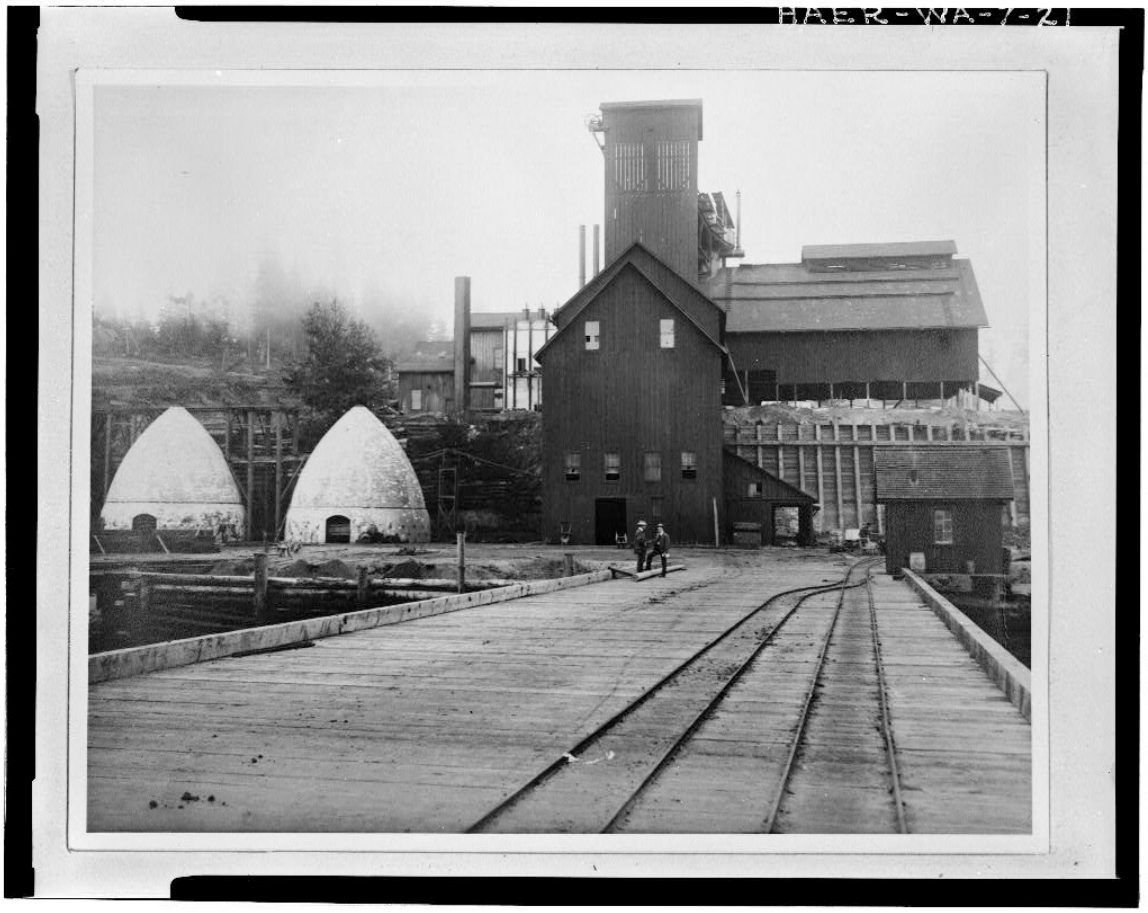
Create Design Drawings. Build models.

Drawings and models are not only critical to the communication of the ideas and plans, but also for working out the dimensions and the details, materials and timelines, the unforeseen complications and solutions. We who are very visually oriented may not realize how difficult it can be for others to follow our ideas, so we must make them clearly visible.

Everything from the "napkin sketch" to the proposal drawings to the finalized images to the engineering drawings will be useful. Good drawings help to inspire confidence. Drawings help to document the exchange of ideas and dreams.

The initial sketches can be fun and wild, a way to brainstorm and jiggle new ideas into existence. The next step will be the scale drawings: get out your ruler, because making them true to scale will be the key to their usefulness! I've often found that my initial vision needed to grow or compress in various ways, to fit the actual space.

For instruction in model-making, I found several books aimed at theater designers and architectural designers. A wide range of pre-fabricated objects and surface treatments are available for model railroad builders: you can find all sorts of little trees and brick walls. For some models it will be handy to have little scale person to show how a human will fit into the space. Scale models are actually a lot of fun to build (What shall I use to represent this texture or that?) Plus there, is a kind of "Wow" factor ... people seem to find models irresistible and fun.



East Side of Pacific Steel Plant, view from wharf. 1901. Asahel Curtis.

Irondale was a classic company town. The housing for officers, workers, and their families can be seen on the hillside behind the plant. Beachcombers today can find "vintage garbage", such as old glassware, that was thrown into pits.

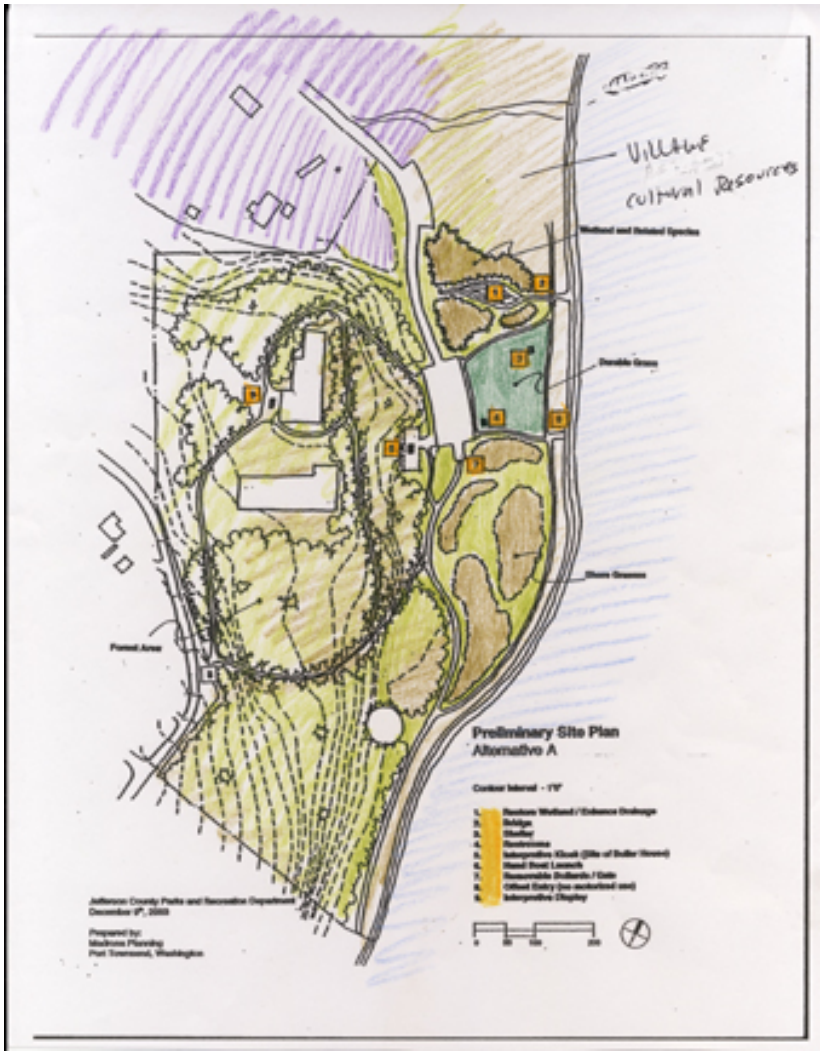
Charrettes for Design.

The "Charrette" is a specific process -a set of steps- for including community input in a design process. The basic idea can be adapted to a simpler form. The key concept is to create a public opportunity for all interested parties to discuss the project, and for the design leaders to receive input, design, receive feedback, re-design, until the project successfully reflects community values.

Public art is often tough for some community members (perhaps they think the resources are better used elsewhere). Studies have shown that the more the public is involved in the process, the more likely the final project will be accepted. I've found that I needed to attend community meetings on a variety of local topics to show that I care about the community's values, doing my homework so I can say something intelligent. Slowly the people in charge of decision-making have come to trust and thank me ... eventually I was even invited to sit on a panel about a controversial public art project in our town.

I've participated in a couple of different kinds of charrettes. One was very well organized, with maps and blueprints lining the walls, and designated "scribes" taking notes on every person's comments and suggestions, using big colorful markers on big sheets of paper.

Another charrette created a playful game: piles of colorful plastic objects and toys filled the center of the table, and participants had 20 minutes to "design their ideal city-scape". People were talking, laughing and sharing their dreams with strangers. This was a great opening exercise.



The Irondale Master plan was created through the charrette process long before I joined this group. Here I have been working with color pencils to clarify the plan (the original is only in black outline). I hoped to promote efficient use of resources during the DOE's cleanup, ultimately to achieve the park's goals.

Uncontaminated soils, which had been used to bury the beach during the time of industry, will now be removed to rehabilitate the beach, and the DOE had planned to truck them "away". We can use these soils for useful amenities, such as improving the parking area, and landscaping for the park.

♥ Create the Artistic Elements

ideally, these elements will be designed to integrate with and reflect upon the site. The animals, plants, insects, birds, humans, fish, soils, water-patterns, geology, human history, current human community, and so on can serve as vital inspiration and meaningful communication.

These elements respond to the community values as discovered through the Charrette process. This can be a wonderful place to incorporate education as well about environmental stewardship. If the Art elements are being created off-site, then they may be completed and ready to install as soon as the remediation is ready.

For Otter Crick, I've proposed two kinds of elements that would integrate community involvement. One would be a tile project with youth (either ceramic or cast-iron tiles), teaching them about the flora and fauna of the site and using that as imagery. The second element would be text: poems or historical quotes from the peoples of that area, which could also be carved or cast into tiles. The tiles could the be laid as mosaic around a dais or seating area.

Everything is sculpture.
Any material, any idea without hindrance born into space,
I consider sculpture.

- Isamu Noguchi, artist

☒ Work with Experts on Ecological Details.

Get it Right! Many well-intentioned "eco-art" projects have either not worked or have even created new problems.

My town, Port Townsend, has been home to one of the classic examples of "failed public art": "Tidal Clock", designed by Chuck Fahlen & Doug Hollis and built in the mid-1980's. This time period (2009 - 2011) has encompassed the deaccession process and selection process for replacement public art, so this site has become a perfect case study for my research.

The original design intended to create a spiral-terraced series of tide pools. The original funding, a $250,000 bequest, began to deplete itself mysteriously before the project was completed, forcing some compromises in the design, which would have protected the interior tide-pools from floating garbage. Some local people debate whether the original design would ever have worked in that particular location, stating that the artists ignored local knowledge regarding the direction of the tidal currents in that bay.

In any case, the original design had an elegant ecological and educational intent, but design-and-construction flaws caused the work to collect garbage rather than the intended tide-pool critters.

The universe is
a communion of subjects,
not a collection of objects.

- Thomas Berry
theologian, ecologist

Mother Earth
is a living, dynamic system made up of the
undivided community of all living beings, who are all
interconnected, interdependent and complementary,
sharing a common destiny.

- Bolivia
legal document conferring rights for Mother Earth

Remove unwanted debris and invasive vegetation.

Yay!!! Be sure to take before- and- after photographs, and celebrate the people who help with this tough part of the job. Remember to insist on safety, and have fun, too!

I've been surprised to learn how many different sorts of groups of people are willing to volunteer for this kind of project.

Oh, and what will you do with the debris? People in rural area often just burn yard waste, but that is very polluting to the air as well as wasteful to the environment. If your community's dump doesn't have a yard-waste composting program, try to borrow a shredder and then compost the shreds ... makes great fertilizer for your site or a community pea-patch.

It's tougher when there is a brownfield to remediate, such as the DOE's project next to Otter Crick. Here in Washington State, the DOE hauls off the polluted soil and puts it in a landfill near the Columbia River. That's not any better, because the contaminants could soak into the soils, leach into the river, or pollute groundwater. Researchers are finding that a certain oyster mushroom, Pleurotus Ostreatus, is particularly good at breaking down petro-chemical toxins, rendering them less harmful ... a very hopeful solution.

We live in a world of pollution
with heavy metals saturating the soil . . .
If that (pollution) could be carved away,
and life could return to that soil,
then a diverse and ecologically balanced life,
then that is
a wonderful sculpture.

- Mel Chin
socially engaged artist

Develop healthy landscape forms.

Are you trying to restore an area, such as a degraded river or wetland? Or perhaps solve an urban problem by adding a bioswale to cleanse runoff from roads? Make sure that the basic land-forms will support the overall function before you start planting. Amend the soils as necessary!

One great source for me was a young idealistic landscape designer, who really wanted opportunities to show what he could do and get some business experience/contacts. His passion is in designing ecological functionality, such as bioswales and raingardens.

The County Parks (which owns the Otter Crick property) also owns some other beach properties, and at one time had armored them with huge basalt boulders. Now, people understand that hard armoring is not healthy for the beach/estuary habitats, so the State's Marine Resources Committee wants to remove these boulders and dispose of them. As I try to help "the left hand talk to the right hand", I've proposed that they be transferred to the County park area next to Otter Creek as landscaping elements ... which the park needs and has no money for.

Chimacum Creek Estuary and Irondale Beach.

❀ Replant native vegetation

There will be quite an art to this phase of the project. Not only must the plants be chosen for their native compatibility and habitat values, such as food, shelter and nesting needs of the wildlife. They must be placed at the best location for their health: relative amounts of sunshine, relative amounts of fresh vs salt water, soil types. Aesthetics and functionality for the human stewards will also be part of the design, so consider durability near pathways, shade near seating areas, and so on.

Our North Olympic Salmon Coalition, a non-profit devoted to restoring salmon habitat, has the expertise and experience (and a driving obsession!) to take on this part of the project.

A thing is right
when it tends to preserve
the integrity, stability and beauty of the biotic community.
It is wrong when it tends otherwise.

- Aldo Leopold
environmental author; ecologist

Install artistic elements

Make sure of the durability and safety of the installation. Use the best technique and adhesives. Enlist an engineer or construction expert to make sure that these elements will be safe and durable.

Imagine that people will do the unimaginable to the artwork! Can a teenage boy climb it, can little kids fall off of it, are there bits that poke out at eye level? I've learned that sculpture is a bit like an iceberg; an artwork might need as much as twice it's weight below ground to act as the foundation.

For Otter Crick, I am proposing tiles in cast-iron or ceramic which can be laid with a pebble-mosaic technique... this will eliminate most safety issues.

Beauty astounds
and pulls the heart's focus
toward the object, out of ourselves,
out of this human-centered insanity
toward wanting to keep the cosmos there
for another spring and another morning.

This is the ecological emotion,
and it is aesthetic and political at once.

- James Hillman,
archetypal psychologist

Documentation

Document everything, from the very beginning! Photographs, videos, notes, recordings, newspaper clippings, relevant emails, a bibliography of reference material ... all can be useful resources. A binder will be very helpful!

Even the documentation can become an opportunity to engage your community. My local WSU Extension has a youth program in which they teach video-making skills. The youth produce a program for the local cable access TV station. They are always on the lookout for good community news stories and opportunities to create video programs. This is OUR story.

Artists are culture-makers,
and culture is the crucible
for changing perceptions and feelings,
for communicating hopes and fears,
and creating choices in places of desperation.

- Arlene Goldbard
writer

♬ Throw a Community Party

Celebrate! Bring people together. Throw a fun, soul-satisfying, pat-yourselves-on-the-back party!

Even beyond rewards and camaraderie, this event can serve other purposes. Celebrations also develop the sense of shared stewardship, within the community for the future of the site. Ideally it will also be an opportunity to extend the network, publicize successes, and inspire future projects. WooHoo!!!

We need to keep on building
that new world,
keeping ourselves attentive to all our privileges,
to all the exclusions,
and to all our gorgeous gifts,
beauty we do not even know yet.

- Petra Kuppers
dancer, author, community-builder

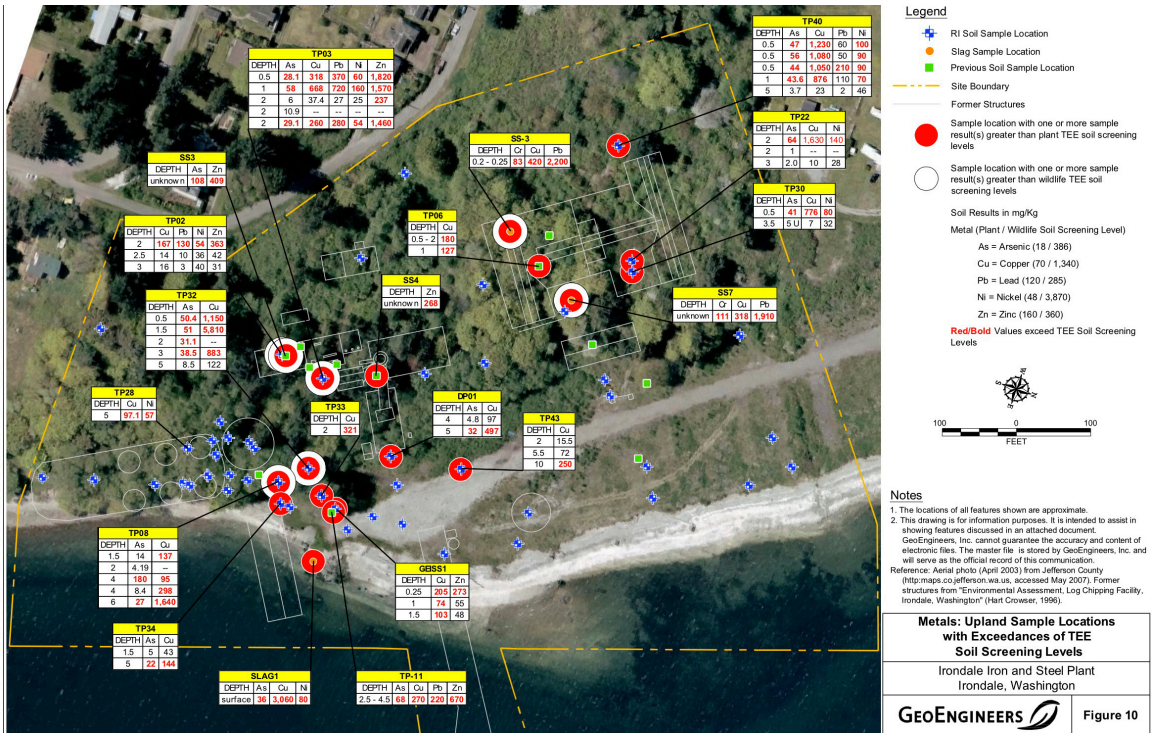
Measure the Success of the Project

How will we quantify the success of the project? Water-quality testing, if water-remediation was involved? Counts of animals or birds nesting in the restored site? Children playing near the artwork? Reduced vandalism in the neighborhood? The number of community members who became involved?

The organizations that have supported this project need to have some quantifiable results, in order to continue to receive their own funding; and it is typical for granting organizations to want a report, for their own records, and to support their own future grant requests.

Certainly this information will be helpful to any artist, to convince other communities to support future projects. For Otter Crick, I had some reliable data about the heavy-metal content of the spring-water, taken by the DOE as they considered the remediation plans for the adjacent brownfield ... so, taking "after" measurements would be the smart move.

But often, "before and after" images of the restoration will suffice, along with counts of the hours that volunteers put in, positive local press, letters of referral. Once again, documentation is important, during each part of the process.



Map prepared by GeoEngineers that shows locations of heavy metal contaminants throughout the site. This map was prepared before any work was planned. The year-round freshwater spring does have heavy metal contaminants, as listed here. After the DOE restoration is completed, samples will be taken again and analyzed, to measure the success of the project.

These, and many other maps, were available at my county library and at the state Department of Ecology (DOE).

Shellfish samples were taken at beach areas A and B; all revealed heavy metal contaminants. Again, this early documentation will provide a great comparison for "after" the restoration is complete.

My work is a testimony
for the power of an individual
to create a call to action.

This work counts.
Each positive thought and action is like a drop of rain,
which will help to nurture and restore our parched land
in danger of further destruction by human greed and violence.

- Lily Yeh
artist, founder Barefoot Artists

Help others to create their own project.

Pay it forward. Learn by teaching. Inspire change.

Temporary projects can be a great way to introduce youth and community to these ideas: consider Earth Day or youth-arts camps or after-school programs that integrate principles of ecology with art ideas. I've taught an integrated art-science camp for our local Marine Science Center, Whale Camp. It was a blast! Some artists have teamed up with science teachers to develop interdisciplinary curricula. Possibilities abound.

Who is better equipped than artists
— thinking outside the box,
employing their creativity and resourcefulness
and a love of beauty —
to envision a more sustainable world?

It is my vision that environmental restoration could become the essential art of our time.

- Patricia Watts
curator; founder of ecoartspace

Post-thesis work and finish: 2011 - 2013

I had been very fortunate to identify and commit to this site just as the DOE remediation was about to go public, so I was able to follow along closely. In the years of 2011 to 2013, the actual construction and remediation happened: removal of old tanks, capping and replacements of soils, safe access for park visitors, and finally replanting of native species.

Community members participated in some of the clean-ups. I gained permissions from the Historical Society and County Parks to collect and preserve old bricks and slag from the beach to save for installation in proposal drawing, and volunteers assisted in dragging buckets of the lovely rubble across the beach to a storage area. We planned to use them as the centerpiece of the ground-level mosaic that would serve as an outdoor meeting area and historical reference.

The State Historical Society decided to leave the beehive kilns in their original location, washing away in the surf. I was disappointed, because all evidence of theses cool historic structures would soon be lost. I wanted them to be placed in a nearby location up hill, where the remnants could be preserved and history shared.

The final element of my vision was to find a teacher who would commit to involving her K-12 students. Our local school has a "Pi program" that concentrates on alternative methods of engagement and learning. One amazing and enthusiastic teacher met with me and my small crew of volunteer ecoart-educators and artists who were all enthusiastic about facilitating an amazing program. The youth would design metal inserts based on the pants and animals of the restored beach; the iron slag from the old steelworks would be cast by a local sculptor. We would all work to build the circular mosaic floor, and the iron pieces would be set into short concrete pillars, useful as seating.

Everything was ready to submit our proposal for the final round of approval at the county Parks committee meeting. Time was tight, as the teacher needed to submit her proposal to the principle of her school the next week, but she was ready.

Sadly, the new members of the committee asked us to undergo another round of

approvals, submitting more information about the teacher's educational specifics and our in-kind donations and funds.

This was the moment where the project came to an end. The teacher would have had to wait another year; I had other projects to engage with; my volunteers wanted to move on. We all felt a great deal of disappointment. After five years, it seemed like time to move on.

Ten years later, I can see how the entire project still had great value even without being built. Many people learned more about what artists can do for community. I learned an indecipherable amount … both about projects and about myself. All of these lessons were incorporated in future projects that were successfully built, and I look forward to an artful revolution which engages humans and multispecies community, history, aesthetics, empathy, ecology and culture.

Notes:

[1] Bower. *What Is Environmental Art?* greenmuseum.org. 2010.

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Bibliography and Additional Resources:

Brookner, Jackie. *Urban Rain: Stormwater as Resource*. City of San Jose. 2009.
This catalogue of one public art project by Brookner discusses the process from initial concept to completion with uncommon openness. Includes essays by curators and community leaders. Brookner is a rare leader in the field of truly functional remedial Eco-art.

Fleming, Ronald Lee. *The Art of Placemaking: Interpreting Community through Public Art and Urban Design.* London: Merrell. 2007. Print.
This large volume, with excellent visual documentation, offers a variety of case studies, a history of public art projects, and critical writing by the author. Includes Fleming's proposals for "Environmental Profiling", which is a set of questions and methods toward designing successful public art, with an emphasis on integration of community input and needs.

Green Museum. *Greenmuseum.org.* Web.
An invaluable site, referring to itself as an Environmental Art Museum Online. Hosting numerous profiles of environmentally-involved artists and their projects; writings, blog and news by artists, critics, curators; tools for educators: opportunities, links and more. Sam Bower is the Founding Executive Director of greenmuseum.org. He is also an artist, educator, curator and consultant. Bower calls for a shift in our culture's definition of art: art as a verb, as Service, rather than art as a commodity.

Kelley, Caffyn. *Art and Survival: Patricia Johanson's Environmental Projects*. SaltSpring Island: Islands Institute of Interdisciplinary Studies. 2006. Print.
With an introduction by Lucy Lippard. Johanson was an early visionary in wetlands restoration. Kelley gives a history of Johanson's work, with numerous images of sketches, plans-in-progress, and final designs.

Kimmerer, Robin Wall. *Gathering Moss: A Natural and Cultural History of Mosses.* Corvallis: Oregon State University Press. 2003. Print.
Forest biologist Kimmerer writes personal essays about mosses, intermingling the scientific perspective with her own Native American cultural framework. Kimmerer's work identifies significant roles for moss in Eco-art as well as developing the reader's sensitivity to the personality, individualism, and collaborative nature of various species of moss.

Lippard, Lucy R. *The Lure of the Local: Senses of Place in a Multicentered Society* New York: The New Press, 1997. Print.
A dual-narrative book: one, Lippard's personal experiences of "sense of place"; the other, a wide range of American examples of art in, and about, localities. Her proposed criteria for place-making ethic (pg 286-7) provides a useful set of objectives.

Maser, Chris, Andrew W. Claridge, and James M. Trappe. *Trees, Truffles, and Beasts: How Forests Function.* New Brunswick: Rutgers University Press. 2008. Print.
This series of essays examines the complexity and interdependency of species in the forest. The forests of Australia and those of the Pacific Northwest, USA, are compared and contrasted. In particular, the authors observe the relationships between trees, small mammals, fungi and microbes, with the goal of supporting sustainable ecosystem policy.

Nadkarni, Nalini. *Between Earth and Sky: Our Intimate Connections to Trees.* Berkely, CA: University of California Press. 2008. Print.

Canopy biologist Nalini Nadkarni, respected world-wide, has written a rich narrative about trees. She explains ecological science, weaving it in with personal stories, history, cultural facts, and poetry from numerous sources. She emphasizes the deep link between humans and trees, and our responsibility to preserve our arboreal companions.

Pindell, Deanna. Eco-Art-Works. www.facebook.com/Eco.Art.Works

An ongoing virtual project in which Pindell frequently posts about ecologically-focused artworks. The brief notations and images are accessible to a non-art audience with ecological interests, as well as to the art professional. Posts are accompanied by internet links to more information about the artist and project. A wide range of projects are featured, from major public restorations, to funky DIY projects, to high technology, to film and video.

Rahmani, Aviva. *What the World Needs Now is a Good Housekeeper.* Self-published. Print.

A simple, illustrated guide to restoring environmentally degraded sites as an ecological art practice. In ten clear steps, internationally renowned artist Aviva Rahmani describes her approach and techniques for working with scientists and engineers to address environmental degradation and global warming. Rahmani's website, Ghostnets, www.ghostnets.com, is also an invaluable source.

Ricou, Laurie. *Salal: Listening for the Northwest Understory*. Edmonton, Alberta: NeWest Press. 2007. Print.

Conceived as a biography of Salal, Ricou's book interviews and documents a wide variety of narratives about the native shrub. Includes traditional Native uses and relationships, and the reactions of contemporary Natives to these recipes; commercial interests such as the floral industry and landscape/garden needs; poetry and music inspired by this modest evergreen bush; and the

importance of Salal in the history and culture of the Pacific Northwest.

Spaid, Sue. *Ecovention: Current Art to Transform Ecologies*
Cincinnati: greenmuseum.org, The Contemporary Art Center, ecoartspace. 2002. Print
Published to accompany the exhibition, *Ecovention.* Focuses on art that is subversive, confrontational, idealistic, survival-driven, and utopian. Much of the work relies on the sciences, especially biology and botany, to provide a functional benefit to the environment. Co-curated with Amy Lipton of *ecoartspace.org*.

Stamets, Paul. *Mycelium Running: How Mushrooms Can Help Save the World.*
Berkely: Ten Speed Press. 2005. Print.
Mycologist Paul Stamets (founder of Fungi Perfecti) presents the basic science of fungi in an accessible manner for the layperson. The various activities of fungi in the forest are discussed, and the importance of mycelium in ecosystem health. Stamets presents both tested and theoretical ideas for the use of mycelia in remediation and restoration of damaged habitats, even to the point of consuming toxins (industrial chemicals and heavy metals).

Women Environmental Artists Directory. WEAD. http://weadartists.org/
This website offers profiles of many artists and images of environmentally-focused work in a variety of categories (for example, ranging from public art to dance to curating to education). WEAD also publishes an online magazine with articles, essays, reviews, events, etc.