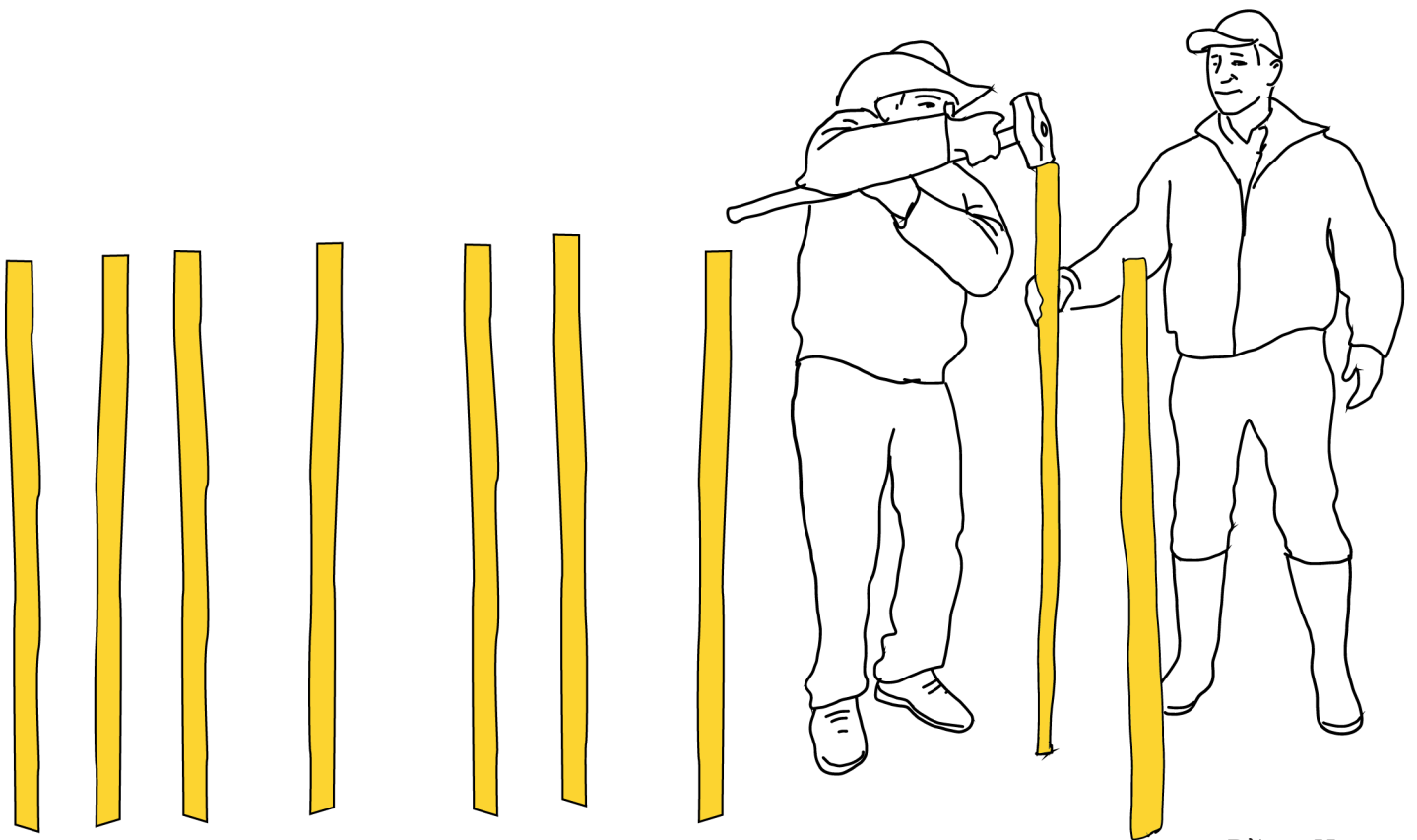


*MOURNING and MEMORY
in the AGE of TOPOCIDE*



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Abstract

This project interrogates the cultural-symbolic functions and consequences of large hydroelectric dams in British Columbia, notably the WAC Bennett and Site C dams on the Peace river. The literature review explores the link between settler colonialism, landscape, and extraction, and this is linked to identity and futurity in settler culture. In this way, the cultural significance of this infrastructure is established. In order to formulate a design approach to the dam, Indigenous ontologies of kinship and more-than-human agency are explored, with an eye to de-weaponizing the beings appropriated by the dam and restoring right relationship. Notions of the Anthropocene, toxicity, futurism, and adaptation are explored. Precedent study reveals strategies of memorial and narrative, thoughtful approaches to insider-outsider memory work, and ecological and structural responses to large dams. The design proposal focuses on narrative, memory, and resistance in order to imagine a future for the Peace River valley.

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1. Introduction

Statement of positionality

My name is D'Arcy Hutton. I am a white settler of Irish, British, French, Ashkenazi, Portuguese, and Arawakan descent. I grew up in Algonquin territory on the banks of Tenagadin Sibi (the Gatineau River) in what is now known as Southwestern Quebec. I moved to British Columbia in the summer of 2017, embodying a kind of nomadism often ascribed to Indigenous people on this continent: a non-cyclical movement unmoored from responsibility to any particular place. I struggle to understand how to live and practice landscape design on stolen lands that, even by settler standards, I am a stranger to. More specifically, I begin this way in order to frame my research as a way of understanding how my own history intersects with the topic at hand: dams on Tse Keh Neh and Dunne-za territory, in what is now called northern British Columbia. Cree researcher and theorist Shawn Wilson (2007) emphasizes the importance of foregrounding positionality in research. He advises that the subjective and the personal be not only acknowledged, but that the researcher's ethics and responsibilities be guided by these relationships. In this work I will invoke my relationship with political ancestors and their legacies over my familial ties. Paulette Regan writes about the "collective moral responsibility" of settlers to accept and address the effects of the Indian Residential School system, and colonization broadly. I take this to mean that political lineages provide a legitimate and impactful kind of subjectivity to engage with in research and design.



Family photo with Edward Bulwer-Lytton, Chelsea, QC, 1993. Image from Bulwer-Lytton & Zeigler, 1902

Argument

We live in the age of the mountain removers, the river rerouters, the forest erasers. Landscapes are routinely destroyed or changed irrevocably by human activity. Sometimes these changes are cataclysmic, and sometimes insidious. To adapt to these changes, human beings must conceive new personal and collective rituals of grieving and memory. This project develops strategies for mourning and memory in the age of topocide.

I approach this research and analysis from two general perspectives: that of settler colonial studies, and Indigenous ontologies of kinship. I do so bearing in mind twin cautions: that settler colonial studies is an incomplete lens, and used exclusively will tend to erase Indigenous presence and agency (Veracini, 2014); and that a superficial appropriation of Indigenous intellectual property will not get me much farther when “Indigenous histories are still regarded as story and process—an abstracted tool of the West” (Watts, 2013, p.28). I will attempt to avoid these mistakes by using settler colonial studies as an analytical lens, but not a tool with which to repair or create. The second pitfall is much trickier, but I will attempt to follow in the footsteps of other settler scholars (like Heather Davis and Donna Haraway) who speculate about kinship and futurity. Indigenous scholars have generated a body of scholarship on ethics and relationality that I will draw from when appropriate, but I will not attempt to interweave histories / origin stories into my theorizing or design process.

The literature review is formatted as a critical essay exploring the social / psycho / symbolic functions and effects of landscape (and specifically dams) in settler colonialism. The first section establishes how landscape and extraction are implicated both materially and symbolically in settler colonialism. I begin with the premise that the colonizing state brings with it ideological imperatives to transform the landscape through productivity and extraction. These imperatives (and the resulting landscapes) take root as components of identity in both the colony and in settlers. These ideologies of extraction have the effect of not only reordering the material and ecological dimensions of landscape, but also the relationships that extend from that place. In fact, as other scholars have built on Wolfe’s influential works on settler colonialism, the colonial dynamic of elimination / replacement is evident in extraction landscapes. Other economies and relationships are erased and replaced by the relationship of development (Desbiens, 2013) and what Michael Simpson (2019) dubs the ‘resource desiring machine.’ I then narrow my exploration to the heavy symbolic load that hydro-electric dams carry in the settler state. I explain how the discourses of ‘progress’ and ‘clean energy’ are used to deny that symbolic load, and how these discourses fit within the colonial rationale of inevitability.

The second section explores how settlers can come to terms with the legacies of their political forebears. This section attempts to frame a design approach for GP 2. I speculate on how I might accomplish this by delving into the notion of kinship relations between human beings, landscapes, and other more-than-human beings. Zoe Todd's (2016) concept of 'weaponized kin' and Donna Haraway's work in 'Staying with the trouble' (2016) are especially impactful here. It is tempting to emphasize mitigating or performing restoration work to counter the ecological impacts of Bennett dam. My analysis of Todd and Haraway's work, among others, suggests to me that memory, grieving, and unravelling/re-storying the narratives of colonialism embedded in the dam are, if not more important, necessary first steps. Maya Lin's Confluence project is a helpful precedent.

This project is occurring at a time of big changes: the BC legislature signed UNDRIP into provincial law only a few weeks ago as the national project of reconciliation picks up steam. The Truth and Reconciliation Report released its 'Calls to Action' in 2015. Canadians are being asked to reckon with their troubled inheritance and collective responsibility. Simultaneously, the climate crisis stimulates the urgency with which citizens and governments consider options for decarbonization, which invariably leads to increased development and impact on Indigenous lands. Across Canada and BC, hydro power is a major pillar of energy policy, even as fossil fuels are extracted in ever increasing quantities. BC Hydro's Site C "clean energy project" faces the latest in a series of legal challenges by Treaty 8 First Nations. These simultaneous narratives are positioned tensely alongside one another, asserting often contradictory visions of the present and future. Designers too are busily developing ways to address climate change and incorporate notions of decolonization and reconciliation into their processes. This project engages heavily with these narratives and attempts to find ways to imagine a future in this compromised landscape, both as a citizen and as a designer. The goal is not to imagine a safe, resolved future, but to propose a liminal space in which settlers can grapple with what Paulette Regan (2010) describes as 'demythification:' the intentional acknowledgement of a destructive past, and the intentional re-storying of history and future.

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Pinar Yoldas' work 'ecosystems of excess' explores utterly pervasive presence of plastic in the oceans. Her speculative sculpture and images imagine a future in which speciation occurs in this plastic-ocean soup.

Pinar Yoldas, 'Ecosystems of Excess,' 2014

retrieved from <https://www.pinaryoldas.info/WORK/Ecosystem-of-Excess-2014>

2. Literature review

Settler colonialism

“You are going to a distant country, not I trust, to fight against men, but to conquer nature; not to besiege cities, but to create them; not to overthrow kingdoms, but to assist in establishing new communities under the sceptre of your own Queen... The enterprise before you is indeed glorious. Ages hence, industry and commerce will crowd the roads that you will have made; travellers from all nations will halt on the bridges you will have first flung over solitary rivers, and gaze on the gardens and cornfields that you will have first carved from the wilderness. Christian races will dwell in the cities of which you will map the sites and lay the foundations. You go not as the enemies but as the benefactors of the land you visit, and children unborn will, I believe, bless the hour when Queen Victoria sent forth her Sappers and Miners to found a second England on the shores of the Pacific.”

Edward Bulwar Lytton, 1858

Settler colonialism in Canada's west was symbolically inaugurated by these words from England's colonial secretary. This vision projects a bright future, summoning into being a prosperous colony, complete with trade, industry, and infrastructure. The migrating workers have only to extract a home from the wilderness and apply a familiar order to the landscape. Indigenous societies are nowhere to be found.

To paraphrase Wolfe (2006): land is life, the struggle for land is the struggle for life, and settler colonialism has the struggle for land and life at its heart. To gain dominion over lands and the more-than-human resources therein colonialism deploys an arsenal of strategies to eliminate and replace Indigenous life (Wolfe, 2006). In Canada, this has included scalping bounties, disease, extrajudicial killing, the Indian Residential School System, assimilation, the on-reserve child welfare system, incarceration, dispossession, and more. Not all of these strategies are confined to the past. As Wolfe (2006) has described, settler colonialism is a structure (whose impacts are continuously recreated) rather than an event which can be safely contained by the past and remedied by apology. Canada lives in a state of continued uncertainty (and corresponding violence) because the “Indian problem” and inherent and Aboriginal rights to land have never been extinguished (Tuck & Yang, 2012). The landscapes from which settlers extract their living remains contested.

Tuck and Yang (2012) describe settler colonialism as practiced in states like the US and Canada as simultaneously internal and external. State strategies of segregation and control allow for a metropole-hinterland relationship wherein Indigenous lands and kin are extracted as resources. As we will see below, the Tse'kehne people living in the Rocky Mountain Trench at the time of the WAC Bennett dam's construction were only confined to reserves after the reservoir flooded the landscape (Sims, 2017).

The kind of provincial colonialism (Desbiens, 2013) expressed by initiatives like the dam mirror elements of classical, external colonialism: “the fundamental decisions affecting the lives of the colonized people are made and implemented by the colonial rulers in pursuit of interests that are often defined in a distant metropolis” (Osterhammel, cited in Veracini, 2010, p.5). Prior to this, the southern parts of the province had only tenuous connections to this area. Extraction enlivens the landscape of the north in the settler imagination (Desbiens, 2013). It is the defining interaction with the land, and its landscapes are heavy with ideology.

Settler colonialism and land

“Colonial rule over the New World was initiated through largely ceremonial practices – planting crosses, standards, banners, and coats of arms – marching in processions, picking up dirt, measuring the stars, drawing maps, speaking certain words, or remaining silent. While military might effectively secured their power over the New World, sixteenth- and seventeenth-century Europeans also believed in their right to rule. And they created these rights for themselves by deploying symbolically significant words and gestures” (Seed, 1995).

Colonization is inextricably but invisibly woven throughout the settler’s imagination and identity. As we attempt to uproot Indigenous origin stories from the land, we create our own from these rituals of dispossession. These ceremonies naturalize our presence here: the defining aspect of settler colonialism is the way settlers come to understand and identify with the places they settle (Veracini, 2010). Place and relationship to place becomes a component of identity as settlers make their home; but the making of home is contingent upon the ceremonies of exploitation and extraction (Voyles, 2015). This is the settler’s way of claiming and familiarizing alien landscapes (Desbiens, 2013). “(The settler) can only make his identity as a settler by making the land produce, and produce excessively, because “civilization” is defined as production in excess of the “natural” world” (Tuck & Yang, 2012, p. 6). Extraction is therefore not only a straightforward political and economic philosophy, but a constituent aspect of settler selfhood and belonging, symbolically and spiritually laden. The landscapes it produces are a kind of ubiquitous monument to the need for belonging.

“The impact of settler colonialism is starkly visible in the landscapes it produces: the symmetrically surveyed divisions of land; fences, roads, power lines, dams and mines; the vast mono-cultural expanses of single-cropped fields; carved and preserved national forest, and marine and wilderness parks; the expansive and gridded cities; and the socially coded areas of human habitation and trespass that are bordered, policed, and defended. Land and the organized spaces on it, in other words, narrate the stories of colonisation” (Banivanua Mar & Edmunds, 2010, p. 2). These “ceremonial” landscapes are profoundly symbolic, and utterly taken for granted.

Settler colonialism and relationships

Colonialism's relationship to land results in a fundamental, disruptive reordering of relationships. Tuck and Yang (2012, p.5) describe the totality and depth of this reordering as a kind of violence that is reproduced every day. "In the process of settler colonialism, land is remade into property and human relationships to land are restricted to the relationship of the owner to his property." Michael Simpson's (2019) account of resource-desire explains a philosophical orientation that understands the world as a collection of solitary elements that can be removed from their relational webs, isolated, quantified, their properties known absolutely, and value allotted accordingly. This orientation likewise divides the world into animate and inanimate, with resources cast as dead matter, denying all relationality.

This approach is in stark contrast to Indigenous governance and relational webs that maintained treaty and governance relationships with more-than-human agents (Borrows in Todd, 2016). Simultaneously, Indigenous relationship and understanding of land and the more-than-human world is "entered" and "made savage" (Tuck & Yang, 2012, p.5). The settler relationship to land as property and resource is not only political but must be a denial of Indigenous relations in favour of assimilation into the nation-state and the regime of extraction (Justice, 2008). "We cannot go to the river to drink anymore; therefore, our relationship with the river is now changed. Our relationship to everything in the world is now changed" (Swamp in Davis, 2010, p.10). The WAC Bennett dam reordered relationships along the Peace river's length, upstream and down. This is consistent with the imperatives to "undo" the ties of existing communities in order to replace them (Loomba, 1998). This undoing of ties includes subverting relationships with the more-than-human world, a phenomenon Zoe Todd (2016) describes in her work as 'weaponized kin.'

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Settler colonialism and resource extraction

“Quebec is a vast hydroelectric plant in the bud...and every day, millions of potential kilowatt-hours flow downstream and out to sea. What a waste!” (Robert Bourassa, 1985)

Resource development, the defining settler ritual, is not only the material reordering of place but also an ontological reordering (Desbiens, 2013) that is accompanied by social, political, legal disruption (Simpson, 2019). Michael Simpson (2019) writes of the ‘desiring machine’ (Deleuze & Guattari, 1983) that recasts Indigenous lands and relations as resources in a self-perpetuating cycle of destructive creation. In this configuration, a ‘resource imaginary’ is summoned into being by the colonizing state while resource-consuming subjects are simultaneously created. This is demonstrated in a literal sense by the promulgation of hydro-electric dams after WWII, intentionally developing surplus energy, followed immediately by the nearly wholesale uptake of domestic electric appliances, generating increasing and ongoing demand. BC Hydro has consistently produced energy ahead of need in the interests of attracting industrial consumers. These have been overwhelmingly tied to resource extraction: first aluminum, then forestry and other minerals, and more recently the proliferation of natural gas development. The resource desire machine is never sated, but continuously pushes farther and deeper into Indigenous lands (Simpson, 2019).

The ‘resource imaginary’ is a way of extending settler authority into a territory. This is described in Caroline Desbiens’ (2013) analysis of hydro development in Eeyou Istchee. Hydro development was instrumental in claiming the territory not only for its resources, but to envelope it in Quebec’s cultural imagination and administrative purview. Extraction, to echo Tuck and Yang (2012), is how the settler creates his home.

This resource imaginary cannot co-exist with other sets of relations and modes of governance; it is expansive and total. Where pre-existing eco- and social-ontological structures exist, the resource imaginary must eliminate and replace them (Simpson, 2019). This is a process Traci Brynn Voyles (2015) calls ‘wastelanding’: the transformation of Indigenous life and land into a wasteland; a conscious imagining that the land holds nothing of value except what can be extracted (Baker, 2016); that it never was and never could be home, kin, relation (Henderson, 2019). What is taken for granted today as the sacrificial landscapes that support settler life are in fact acts of violent dispossession (Braun, 1997) that go hand-in-hand with violence against Indigenous people, particularly women (Baker, 2016). The desire-machine creates and enforces rights, property law, and boundaries with the threat of violence (Rasmussen & Lund, 2018). This is an authority that flattens the living, animate world into isolated properties, “abstract forms that are legible from afar” (Simpson, 2019, p.2) generated by the synoptic, bird’s eye view of the cartographer (Scott, 1998).

This abstraction poses a harsh contrast to the immediate and tangible loss experienced by those living locally. Critiques of the synoptic view hit close to home for landscape architects, whose outsider expertise often relies on documentation of landscape.

The resource imaginary is closely tied to another notion of waste: unless all value is extracted from the territory, it is wasted. ‘Waste’ is implicated in the Doctrine of Discovery and Lockean property rights in which ownership is contingent upon improvement by labour; the legal mechanism of pre-emption invokes waste. “Waste” is applied to water with only minor variations. Water has been understood as a transient resource and part of ‘the commons’ as far back as Locke. To benefit, one must seize it and wring value from it as it passes by (Matsui, 2009).

Settler colonialism and futurity

Settler futurity is inextricably linked to resource landscapes. Michael Simpson (2019) describes resources as ‘stored potentiality’ that allow settlers to project a future. Edward Said’s essay ‘Invention, memory, and place’ (2000) describes the phenomenon of fabricated antiquity being implanted into the hearts and memories of colonial subjects, and this is also at work in the monumentality of dams. Geography is the nucleus around which these invented memories are crystallized, with absolute claim and “settler nativism” the objective (Tuck & Yang, 2012, p.13). Caroline Desbiens (2013) describes hydro development during the high modernism era as inherently aspirational: dams were a glimmer of what a nation could be. Dams reinterpreted traditional values of nature, land, and belonging (as described by Lytton as he sent British settlers off in 1858) to project a desirable future that remained familiar. Past and future are referenced almost simultaneously in colonial landscapes; settler futurity relies upon this imagined heritage. This dynamic has not changed since colonization, and the way settlers conceive of (or oblivate) their history has deep implications for the present and future. Edward Said (1993) tells us that these implications are more important than the history itself. Likewise, Paulette Regan argues that history can neither be useful nor progressive unless it clarifies and connects ongoing injustice (Regan, 2010).

Dams

Dams do many things. Seen from every angle -- as infrastructure, as ecological catastrophe, as relational disruption, as territorial claim, as extraction landscape -- they reflect the aspirations, imperatives, and ontology of their makers. As landscapes that tell the story of colonization, they engage in Indigenous erasure and dispossession in the most literal sense: home, relations, economies, ancestors, and memory are drowned below reservoirs. Dams express colonialism's intolerance for any other human use, and indeed for more-than-human relations or the land's intrinsic value and agency. Its appropriation of the land and waters is total. Any other relationship or economy is deemed wasteful (McCully, 2001). McCully describes how dams always enact the transfer of use from one pre-existing set of users to another; they are instruments of domination over nature which "turns out to be a power exercised by some men over other men with Nature as its instrument" (Lewis, 1943, p.54). Loo and Stanley (2011, quoting Paul R. Josephson, 2002) describe dams as 'brute force technologies.'

Dams impose discipline on the lands and water as living rivers are quantified into units of flow. Seasons are reordered by the artificial rhythms of high and low water. "Perhaps more than any other technology, massive dams symbolize the progress of humanity from a life ruled by nature and superstition to one where nature is ruled by science, and superstition vanquished by reality" (McCully, 2001, p. 237). Dams, as I will discuss, are often de-politicized and rationalized through apparently straightforward discussion of water, energy, and demand, but the terms of this discourse should be recognized as ideological rather than inevitable. Dams symbolize the power of the nation, triumphing over the forces of nature, which in the case of WAC Bennett was understood to include Indigenous populations (Sims, 2017). This theme of 'taming the wilderness' originates in the biblical imperative to 'subdue nature' (McCully, 2001). Dams have also been compared to places of worship: India's first prime minister Jawahar Lal Nehru coined the phrase "the temples of modern India" in 1954 at the dedication ceremony of the Bhakra Nangal hydroelectric project, suggesting that these projects function in ways that go well beyond the pragmatic. Patrick McCully has called dams 'pharaonic works' (2001, p.243): their pragmatic function is secondary to their symbolic function. Dams, particularly in the era of mega-dam proliferation in the fifties and sixties, are monuments to nationalism and high modernism, and to the politicians who rest their legacies upon them.

High modernism, coined by anthropologist James C. Scott (1998), is an ideology that embraces massive state-sponsored development projects in service to the common good. It rests upon the desire to utterly transform the natural world (Scott, 1998). The threads of domination, order, and nationalism run throughout these ideological positions.

Indeed, dams are cultural texts that express the collective anxieties and aspirations of a society. Max Haiven (in Chen et al, 2013) describes them as liminal figures, positioned at an ambivalent threshold between visionary technological progress and repressed impulses of self-destruction. Daniel Sims (2017) describes dams as both expressions of and shapers of culture.

“Dams are cultural artifacts of the societies that build them. In this sense, the W.A.C. Bennett Dam is a physical testament to the logic of hydroelectricity – a firm belief that an abundance of cheap electricity guarantees industrialization and economic prosperity. It is also a monument to settler colonialism...the W.A.C. Bennett Dam is part of a wider global history of colonialism and empire.” (p.441)

The Bennett dam also functions as a monument to the politicians and bureaucrats who led its construction. This literal reshaping of the landscape – a mountain moved, a river turned to a lake – was accompanied by naming and re-naming. Williston lake after the Minister of Lands and Forests, Bennett dam after the premier, and the G.M. Shrum generating station after the head of BC Hydro. This total re-imagining of place mirrors perfectly the re-creating and erasure of lands and relationships that colonization wrought across the continent (Sims, 2017).

Clean energy and inevitability

Dams are the subject of the same de-politicizing discourse of progress, inevitability and rationality that was applied to the conquest of the “new world.” Inevitability has always permeated the rationales of settler colonialism (Makoun & Strakosch, 2013). This de-politicizing discourse attempts to make the settler state is so natural and pervasive that it is taken for granted (Veracini, 2010). As Michael Simpson describes: “the resource emerges from violent acts of dispossession before its origin story is later reframed as the teleological outcome of cultural and technological advancement” (Simpson, 2019, p.11).

In BC, this discourse was first applied to dam-building by framing progress through resource exploitation as an inevitability: the irresistible imperative of economic development. The many-layered web of stakeholders and priorities was collapsed in favour of a “straightforward meeting of energy needs” (Desbiens, 2013, p.57). In an age of environmental uneasiness, the inevitability discourse around dams leans on the logic of increasing demand paired with the imperative of climate change, a technological escape from climate disaster and responsibility. This is not to say that hydropower is not useful or even necessary in a decarbonized society. For example, an honest calculation of whether Site C is necessary exceeds the limits of this essay (and graduate degree!). Rather, it is important to recognize how the discourse describing this supposedly virtuous technology obscures its destructive legacy, and the ideological traditions from which it emerges.

This new framing of clean energy as inevitability also blurs the continued support for extractive private industry. Hydropower is the key to a low-carbon future in which climate disaster is averted without fundamentally changing the resource economy of British Columbia. This discourse of inevitability is at work once more in the proposed and contentious Site C dam. The virtue and inevitability of clean energy is used for the benefit of the oil and gas industry:

Recognizing that natural gas can be a transitional fuel on the path to less carbon-intensive options, the CleanBC program for industry will encourage the use of the greenest technology available in the sector to reduce emissions and encourage economic and job growth. More reductions from LNG's climate impact will be achieved through investments in electrification of upstream oil and gas production so extraction and processing are powered by electricity, instead of burning fossil fuels.

(CleanBC, p.44)

Paulette Regan describes the “demythification” (p.58) of Canada as a key element of any decolonizing or reconciliatory action. The government discourse surrounding hydropower as a clean energy workhorse is a mythology that demands scrutiny. The synoptic view in which nuance and context are flattened obscures the many-layered ill effects of the Bennett dam. In the case of Site C, opposition from Dunne-za people and local settlers has been sustained and effective, impossible to completely obscure. But government framing of the project retains its sense of inevitability, and its inevitability justifies the destruction it wreaks. Clean Energy is apolitical; it is an example of ‘settler neutrality,’ (Regan, 2010, p.39) merely a simple and inescapable conclusion by the numbers that secures settler futurity. This discourse also pushes the kind of “comic faith in technofixes” (2016, p.3) that Donna Haraway argues against. She repudiates this inevitability by inviting us to “stay with the trouble:”

“In urgent times, many of us are tempted to address trouble in terms of making an imagined future safe, of stopping something from happening that looms in the future, of clearing away the present and the past in order to make futures for coming generations. Staying with the trouble does not require such a relationship to times called the future. In fact, staying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configurations of places, times, matters, meanings.” (2016, p.1)

The temptation to cling to a technofix – one that requires no fundamental change in behaviour or approach but offers the safe future that Haraway describes -- is strong in a speculative landscape project, where a designer is free to imagine radical changes in context. What Haraway describes in ‘Staying with the trouble’ does not preclude technological advance. As a designer, I am interested in finding an approach that does not indulge in fatalism or Edenic fantasy, nor forecloses on the possibility of healing and restoration. The next section will explore ways to establish this approach.

Kinship

“The tools are often stories, retold stories, versions that reverse and displace the hierarchical dualisms of naturalized identities. In retelling origin stories, cyborg authors subvert the central myths of origin of Western culture. We have all been colonized by those origin myths, with their longing for fulfilment in apocalypse” (Haraway, 2006, p.141).

The WAC Bennett dam is one such origin story that remains active on the landscape, and in imaginations across the province and along the length of the Peace river. It tells stories about citizens’ right to the land, which beings (human and more-than-human) are accorded agency and which are sacrificed, and what kind of future we can all imagine together. To reimagine the future, these stories must be interrogated and, perhaps, subverted and retold. But what is a coherent framework for doing so? On stolen land no treaty exists to provide a framework for just settler futurity. The very conditions of colonialism insist that Indigenous people and settlers inhabit different worlds (Donald et al, 2012, p.54). Sisseton Wahpeton Oyate scholar Kim Tallbear (2016), speaking about reconciliation, offers a hint:

“This isn’t about indigenous peoples being incorporated into your world. It’s about you learning how to live here in relation with this place and with peoples who were long co-constituted in relation to these lands and waters and skies. You clearly did not learn how to do that very well. I want to also emphasize one idea that the TRC calls for action don’t sufficiently address: Kinship obligations to nonhuman kin were also violated by the settler state. The decimation of humans and nonhumans in these continents has gone hand in hand. When one speaks of genocide in the Americas it cannot be understood in relation to the European holocaust, for example, that is seen as having a beginning and an end, and which is focused on humans alone. Our genocide in the Americas included and continues to include our other-than-human relatives.”

Here, Tallbear draws attention to both relationship and nonhuman kin. Many Indigenous scholars and knowledge keepers have described a framework of relationality that underlies Indigenous law that does not place human beings as the only actors in ethics and governance.

“habitats and ecosystems are better understood as societies from an Indigenous point of view; meaning that they have ethical structures, inter-species treaties and agreements, and further their ability to interpret, understand and implement. Non-human beings are active members of society. Not only are they active, they also directly influence how humans organize themselves into that society” (Watts, 2013, p.23).

The agency Watts describes here is echoed by Sto:lo author Lee Maracle when she states “the water owns itself” (in Christian & Wong, 2017, p.37). Me-tis scholar Zoe Todd (2016) investigates the role of “fish-as-political-citizens.” She suggests according agency (in a sense, reanimating) more-than-human beings that the settler gaze has rendered inanimate resources. These concepts are extremely intriguing but read as fairly abstract to one without a relevant cultural frame of reference. In many cases, teachings about kinship relations and agency vis-a-vis more-than-human beings can be traced back to origin stories.

To interpret this knowledge as abstract or metaphorical is troublesome. Mohawk / Anishinaabe scholar Vanessa Watts (2013) cautions that settlers attempting to interpret these histories – even with benign intent – can lead to a recreation of the objectifying dynamics of settler colonialism.

“These types of historical Indigenous events (i.e. Sky Woman, the Three Sisters) are increasingly becoming not only accepted by Western frameworks of understanding, but sought after in terms of non-oppressive and provocative or interesting interfaces of accessing the real. This traces Indigenous peoples not only as epistemologically distinct but also as a gateway for non-Indigenous thinkers to re-imagine their world. In this, our stories are often distilled to simply that – words, principles, morals to imagine the world and imagine ourselves in the world. In reading stories this way, non-Indigenous peoples also keep control over what agency is and how it is dispersed in the hands of humans” (Watts, 2013, p.26).

Perhaps an appropriate approach lies in settler scholar Paulette Regan’s (2010) approach of ‘demythification,’ wherein settlers grapple with the present-day implications of their political forebears’ violence. This includes claiming relationship to destructive or ambivalent legacies, or by considering what Zoe Todd (2017) calls ‘weaponized kin.’ In her analysis of an oil spill in the North Saskatchewan river, Todd considers her relationship and responsibility to the beings (“dinosaurs and ancient plants”) that are extracted as oil. In doing so, she recognizes the inherent worthiness these beings possess as earthly kin. She locates the source of the problem with the ideologies and methods of the settler state and economy, which are ripe for settler critique. She then challenges the reader to “imagine how we may de-weaponise the oil and gas that corporate and political bodies have allowed to violate waters, lands and atmospheres across the prairies” (Todd, 2017). The Bennett dam is made of kin: glacial deposits, minerals, and ancient beings transformed into limestone and later concrete. The Peace, Finlay, and Parsnip rivers are likewise weaponized by their transformation into a reservoir. These beings are all deployed to ends that destroy Indigenous lifeways. Is it possible to engage in an ethic of relationality without reproducing the objectifying dynamics of settler colonialism?

Settler scholar Heather Davis explores human-plastic relations in her work, offering the possibility of casting these beings as ‘kin’ (Davis, 2015) and argues for developing an ethics of responsibility, care, and compassion for these invented agents (2016). In her 2016 talk ‘the queer futurity of plastic,’ she describes a state of toxicity as one in which human and more-than-human beings learn to exist in a permanently compromised world, as opposed to the unambiguous catharsis of apocalypse. She suggests that imaginative and speculative work that implicates these destructive technologies are worthwhile exercises, especially when done playfully in the face of a bleak future. She argues that this work can carry a “notion of obligation and care toward the future” (2016). These ideas challenge the way I normally dismiss and condemn the products, waste, and infrastructures of colonialism. Davis’ work suggests an approach that centres the fact of a permanently altered world.

Ecological restoration is not enough to address this altered world. In her article 'Reclaiming nature? Indigenous homeland and oil sands territory', settler scholar Tara Joly critiques the construct of reclamation of post-extraction sites. Above all she reminds the reader that places never stop being homeland, though the landscape may be utterly transformed, materially and spiritually. True reclamation is a social/spiritual process that Indigenous people undertake to repair social relations with a place. Disturbingly, Joly recounts community members' assertion that "the extraction of bitumen represents negative reciprocity with the land, in which resources are taken without a gift in return, thus severing social relationships with a sentient environment" (Joly, 2017). This is echoed in Tse Keh Neh scholar Daniel Sims' (2017) work when Tse Keh Neh elders tell him that the damage (ecological, cultural, social) done by the WAC Bennett dam is irreversible. Acknowledging the irreversible nature of these changes has implications for how I imagine a future for this dam. This is a kind of "staying with the trouble" that Donna Haraway (2016) advocates for.

Calling in the Bennett dam as relation must also address the impacts to more-than-human beings. Donna Haraway specifies that, in the face of loss, other beings besides humans practice grieving. She argues that "outside the dubious privileges of human exceptionalism, thinking people must learn to grieve-with" (Haraway, 2016, p.38). She elaborates that "mourning is about dwelling with a loss and so coming to appreciate what it means, how the world has changed, and how we must ourselves change and renew our relationships if we are to move forward from here." Stories are an important aspect of both mourning and of communicating loss. Perhaps grieving and narrative are helpful tools in the demythification of Bennett dam.

These ideas of toxicity, grief, and 'staying with the trouble' destabilize a design approach that focuses on ecological fixes and the notion of restoration. Memory work, relationality, and narrative are indicated as appropriate and powerful concepts to frame a design approach. More than that, they frame an approach to what some might call reconciliation and the acceptance of collective responsibility. This is not to say that restoration work should not be used to improve material conditions for those affected by the dam, but rather emphasises the importance of "daylighting" the trouble alongside restoration so as not to obscure the story with the fix.

Precedent study

My precedent study attempted to address three topics identified over the course of my literature review: memory and narrative; design and the dynamic of insider/outsider; and the ecological or structural conditions created by the dam.

THE CONFLUENCE PROJECT

Maya Lin and partners, 2002 - present



Map of Confluence project sites retrieved from <https://www.confluenceproject.org/river-sites/>

Confluence is a multi-site project spanning the Columbia river. Confluence is primarily designed by Maya Lin, in collaboration with Indigenous artists and tribes, and supported by a variety of public, non-profit, local, environmental and tribal organizations. The work is a series of six landscapes, half restoration, half memorial, half installation. The project's stated mission is to "connect people to the history, living cultures and ecology of the Columbia River system through Indigenous voices." The project was initiated in anticipation of the 200th anniversary of the Lewis and Clark expedition, though the intention was to direct the project through Indigenous knowledge and history, rather than focusing on the perspective of the transient newcomers. Using the detailed notes from the expedition, which Lin describes as a "time capsule" (Lin, 2019), the sites are restored and interpretive and art installations embedded. The project seeks to reorient visitors to Indigenous presence and history, and simultaneously to changes in the landscape since Lewis and Clark's journey, which signifies the entry of the region into the European imagination. Installations assert tribal ties to place and commemorate the landscape as it was known by tribal nations and encountered by the explorers.

Confluence includes curriculum initiatives including participatory art and experiential learning projects. Confluence hosts panels, workshops, concerts, and work parties. Curricular programs are downloadable from the Confluence website, and the organization connects classes to Indigenous artists and culture-bearers. The website includes a library that is a rich resource for video, text, and archival information about the Columbia river.

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Colorized photo of Celilo Falls cable car. Retrieved from <https://www.confluenceproject.org/river-sites/>

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Antone Minthorn gazes at the former location of Celilo Falls. Still from 'Confluence Project at Celilo Park.' Retrieved from <https://www.confluenceproject.org/>

The Confluence Project
Celilo Park, Wasco County, Oregon

For thousands of years, Celilo Falls was the economic and cultural center of the Northwest, known to be the oldest continuously inhabited place in the region. It was a highly productive fishery. The Dalles Dam was completed on March 10, 1957, and in a period of 8 hours, rising waters submerged the site. The Confluence Project proposed for Celilo Park is designed to tell the story of Celilo falls and assert both the history and futurity of the people who have lived with the falls for millennia. At the initiative of the Confluences project, tribal elders indicated to Maya Lin that the story of Celilo falls and the Dalles dam was still too painful; they were not yet ready to tell it to the world. After construction was completed on two other sites, the tribes reapproached Lin and asked her to proceed with Celilo falls. The project is not yet built.

“It’s the most sacred of the sites. It’s the one that was completely erased, so what we will be dealing with here will be a memory work that brings you back to what it used to be like...this isn’t just about locking in an idea of where we were, but also where we’re going.” (Maya Lin, 2019)

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Model of Celilo Arc. Still from ‘Confluence Project at Celilo Park.’ Retrieved from <https://www.confluenceproject.org/river-sites/>

Lin’s design is named ‘Celilo Arc’, referring to a 500-foot elevated walkway inspired by the wooden fishing platforms used by Indigenous people before the dam. Lin describes it as “a story you can walk, and it will unfold.” She emphasizes that this intervention is not only about commemorating loss, but also affirming and revealing what remains below the surface. The arc extends over a peninsula, with quotes and descriptions of the falls arranged in chronological order, proceeding towards the end. The walkway ends abruptly, over the water, with the last quote an account of the construction of the dam and the filling of the reservoir.

The remainder of the site is meant to retain the function of a recreational park; visitors can still go windsurfing or picnicking. In Lin’s proposal, half of the existing parking lot will be restored to native grassland. Once visitors emerge from their cars, they can step through a threshold of water-carved river stone and into a plaza. Along one edge is a relief map of the falls’ topography, now underwater. A series of interpretive plaques line the space. Boulders from the river are arranged, and one large one is hollowed out to allow visitors to step inside and listen to archival recordings of the falls’ roar. Lin suggests that there will be a way for visitors also to record their own memories of Celilo falls.

Evaluation

Maya Lin's work on Confluence is the result of years of relationship building with local tribes and is an excellent example of collaborative memory work. The Celilo Falls site is not only about memory but is oriented towards the future. Lin's work here is not overtly critical but remains engaged with history. Her orientation in the work is affirmative, invested entirely in supporting the vision and memory of the tribes. The proposed design is simple but features a series of different spaces. As a memory work, the design incorporates some didactic elements (interpretive panels, relief map, quotes) rather than relying solely on the landscape: it is as much about education as it is experience.

Takeaways

This project is a compelling argument for addressing ecological and cultural loss through memorialization; memory work as a way of 'staying with the trouble.' Confluence as a whole addresses the entire river system by locating interventions in key sites, and this is a helpful example of how to engage with a system of this scale. This project engages with the distinctiveness of local conditions and stories while still acknowledging that the Columbia River system is an entity in its own right.

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Perspective of proposed Celilo Arc. Retrieved from <https://www.confluenceproject.org/river-sites/>

REVIVING THE 30 METRES

Tianjiao Yan, University of Toronto, 2017

ASLA honour award in analysis and planning

This student work addresses the social and environmental disturbance caused by the construction of the Three Gorges Dam on the Yangtze river. Yan focuses on the large, linear reservoir formed by the dam in the steep Yangtze valley. The scale of disturbance is massive: 632 km² of riparian lands, 13 cities, 140 towns, and 1352 villages were submerged. 1.24 million people were displaced.

The reservoir is now governed by an engineered flow regime which creates a thirty-metre fluctuation zone along the shoreline. This amounts to 440 km² of land. Yan identifies this ribbon as both “the interface of terrestrial and aquatic ecosystems (and) also the cradle of Three Gorges civilization” (Yan, 2017).

Yan identifies 4 issues to address:

- Ecosystem degradation caused by the fluctuating water levels. This results in an unstable shoreline ecosystem where neither terrestrial nor riparian communities are able to establish. This has impacts on the aquatic life in the reservoir at large.
- Erosion and sedimentation caused by the moving water, exacerbated by the site's geology. The reservoir requires constant dredging because of this.
- Human-land crisis and the loss of arable land. Populations across the country continue to rise, putting pressure on the nation's food producing landscapes. The reservoir has submerged nearly 13,000km² of arable land.
- Culture loss and the submersion of relics and archaeological sites.

Yan's design intent focuses on the fluctuation zone. His proposal creates opportunities for ecological and economic productivity using green infrastructure, monitoring technology, and adaptive agriculture, conceived of through a Daoist lens. He employs three design strategies:

- Simultaneous stormwater and dredging management: using bio-retention cells along riparian zones, Yan captures stormwater and sediments. This capture shifts with the seasons; as runoff decreases and slows, more sediment is captured by the system.
- Seasonal transformation of adaptive agriculture: a second site near a village incorporates layers of terraces to establish a rotating cropping system based on seasonal water levels, plants' production time, and tolerance for flooding. Floating aquaponic production is also included.
- Integration of fishery monitoring system: Yan proposes a series of strategies for habitat restoration and monitoring. Groups of poles in the fluctuation zone slow water velocity and help to retain spawning gravel. Adhesive nets of local materials are installed as additional spawning habitat. This system incorporates monitoring technologies like mobile biotelemetry and dissolved oxygen sensors.

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Site analysis of Three Gorges Dam, Tianjiao Yan, 2017. Retrieved from <https://www.asla.org/2017studentawards/333398.html>

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Typology of proposed interventions, Tianjiao Yan, 2017. Retrieved from <https://www.asla.org/2017studentawards/333398.html>

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Context of proposed interventions, Tianjiao Yan, 2017. Retrieved from <https://www.asla.org/2017studentawards/333398.html>

Evaluation

Yan's project is grounded in material technologies and interventions to address ecological and social damage. His interventions all offer economic benefit to nearby communities and rely on the participation of residents to function. They also leave room for further enhancement of the fluctuation zone by providing dredgeate. These case studies also appear to be replicable in other locations along the lake, which is an effective way of dealing with a site of such enormous extent. It is difficult to assess how culturally relevant the interventions are as an outsider.

Takeaways

This project offers some methods for dealing with a reservoir subject to drastic water level changes. Williston Reservoir has a similar fluctuation zone and associated problems of erosion, sedimentation, and ecological damage. Both the techniques (particularly the insight of using terraces to normalize conditions along the shoreline) and the approach (of developing a strategy that could be implemented beyond the focal site) are applicable to my project. However, there are places where Yan's approach differs from mine. The cultural context of the reservoir is different, and the prospect of making large-scale changes to the landscape should be approached with hesitancy. Yan's project is extremely pragmatic and offers no obvious critical stance on the dam, instead offering solutions to the "hard" problems of landscape rather than taking a rhetorical stance. Based on my literature review, I am wary of any interventions that abstain from taking a political stance in the face of such clear power imbalances. This project is very successful despite this because of the possibilities these interventions pose. Paired with a more critical approach, pragmatic solutions such as those offered here would be extremely powerful.

Yan chooses sites and interventions that require the habitual presence and participation of people. This approach would not scale up well on Williston Reservoir; though there are points of habitual access to the waterbody, notably the community of Tsay Keh Dene and the dam itself, much of the reaches are extremely remote. Boat launches, logging roads, mines, and cutblocks are most of the human use surrounding the reservoir. Interventions like Yan proposes would not scale up well on the site.

MYTH, MEMORY, AND LANDSCAPE IN THE PYRAMID LAKE PAIUTE RESERVATION

Derek Lazo and Serena Lousich, 2018

ASLA Honour Award in General Design

This project emerged from a studio at UC Berkeley led by Danika Cooper. The aim of the studio was to disrupt narratives of the desert as infertile, barren, and unproductive. Lazo and Lousich's project explored the relationship between Indigenous history and outsiders in and around the Paiute community of Pyramid Lake, located about 50 miles outside of Reno, Nevada. Their goal was to create a project that would speak to outsiders and was an exploration of how designers can address shared history as outsiders.

The project centres around Pyramid Lake. It is large, occupying nearly a quarter of the reservation's land base. This waterbody has always been both economically and culturally important for the tribe, whose name 'Numu (or Cui-ui) eaters' refers to trout from the lake and the Truckee river that feeds it. The river was channelized in 1905 and its waters used as municipal drinking water and irrigation for white settlements. This had catastrophic effects on the lake and all who relied on it. Today, the water level rests more than 100 feet below what it did before the diversion. Lake Winnemucca, Pyramid's sister lake, is permanently dried, an alkaline scrubland. Cui-ui trout are now locally extinct.

The project uses storytelling, an important Paiute teaching technology, as a design methodology. The designers conceptualized the post-diversion events surrounding the lake as a narrative. When this new story is combined with traditional stories about the lake it forms a life history of the lake. The resulting landscape design takes a circular path with five distinct sites of intervention, a closed cycle, expressing that if history isn't acknowledged and the truth goes untold, the same mistakes are doomed to reoccur.

Lazo and Lousich employ subtle variations in grade to deliver a striking experience. The visitor begins by descending into a cut in the earth where layers of lake sediment are visible. The pathway widens to a flat plane of dried Tule reeds, then narrows and begins to descend. Corten steel walls close in and pinch the plane abruptly, signifying the sudden death of lake Winnemucca and the Cui-ui. The visitor proceeds and the walls fold away into the existing landscape, and the visitor is back where they started.

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Pyramid Lake, Lazo & Lousich, 2018. Retrieved from https://www.asla.org/2018studentawards/493010-Myth_Memory_And_Landscape.html

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Narrative diagram, Lazo & Lousich, 2018. Retrieved from https://www.asla.org/2018studentawards/493010-Myth_Memory_And_Landscape.html

Evaluation

Lazo and Lousich engage with a complex and worthwhile topic in their work: how to design on Indigenous land, employing Indigenous knowledge, as an outsider without direction from the community. They do this through responsible research and a carefulness about which dimensions of the history they productively engage with. In this case, they choose to address non-Indigenous visitors to this site, which is the opposite of the of the almost reflexive desire to “save” Indigenous people. I think theirs is a worthwhile approach, and thoughtfully done in this case. This project engages with a story that began a long time before settlers came to Paiute territory, and this is acknowledged in the design proposal. The beauty of the land and Paiute culture is also acknowledged in this project. I think this approach is balanced: it reads as an articulation of loss and simultaneously as a celebration of a beautiful place and culture.

Though there are obvious ecological problems on the site that presumably the designers could have addressed, they chose not to. Rather than creating an imaginary world in which the waters are restored, and the management regime radically changed, they address the site as it is. Their proposal makes no effort to remedy the loss experienced by the tribe in relation to the lakes. I think this is a subtle choice that carefully acknowledges the role of design and the limitations of their role as outsiders.

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Plan & section, Lazo & Lousich, 2018. Retrieved from https://www.asla.org/2018studentawards/493010-Myth_Memory_And_Landscape.html

Takeaways

This project offers a way of engaging with the cultural and environmental fallout of colonialism, which is what my project hopes to attempt. The most interesting dimension of this proposal is in its avoidance of tackling the ecological restoration of the lakes. This prompts questions of how we choose to imagine the future in our speculative work: conservatively, or by imagining radical change? This project suggests that imagining a conservative future (in which the overarching conditions of a site are unaltered) does the important work of revealing the truth of the site as it is, and that the impulse to tackle problems that are systemic rather than design-oriented (thereby imagining a radical future in which we base our proposals) runs the risk of obscuring the important stories of why and how a site came to be. I think it's important to consider the ethics of imagining alternative futures, particularly when engaging with the topic of colonization and intervening in sites that deeply implicate Indigenous groups. My project explicitly deals with the problems of settler futurity and its relationship to the past and will proceed without any input from Tse Keh Neh people whose territory I will intervene on. Lazo and Lousich's proposal causes me to reflect on the dynamic of unilateral future-making in this context.

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Perspective, Lazo & Lousich, 2018. Retrieved from https://www.asla.org/2018studentawards/493010-Myth_Memory_And_Landscape.html

Conclusion

Over the course of this essay, I have explored the cultural resonances and functions of settler colonial landscapes, extraction, and the WAC Bennett dam. These functions reach back into the past, permeate the present, and implicate the future. They are ambivalent, difficult, and destructive. This section formed the groundwork for more speculative research on how to define my relationship and response to this landform – monument – infrastructure – kin. The second section, on kinship, reoriented my conceptual approach to this site by framing the dam, its reservoir, and downstream effects as narrative, memory, and kin. The third section, precedent, offered strategies to address memory in system-scale sites, ecological and infrastructural approaches to issues posed by reservoirs, and a thoughtful approach to insider-outsider memory work. In response, I propose a design approach moving forward that seeks to de-weaponize, demythologize, and re-story the dam and its related sites.

The insight I am left with at the conclusion of this study is that there is a deeper kind of restoration possible on a site like the WAC Bennett dam. It is easy (and not wrong) to reach for ecological / structural solutions to mitigate the harm the dam continues to do -- but that strikes me as a little akin to Donna Haraway's 'technofixes.' The research prompts me to think a little harder about where the trouble comes from, and where it might be going next: to put it plainly, the trouble is ideological, cultural, and personal. There is no safe future possible unless these dimensions are also restored. In this case, the tools I will work with will be memory and narrative in addition to the ecological / structural.

The final glimmer of insight is just emerging, and was not explicitly touched upon in this work: the ability of landscape architecture to produce designs that are process-oriented rather than static and permanent. Restoration always implies ongoing change, and that is true for both narrative and ecology. I am curious about producing liminal spaces that allow for the agency of the beings involved: plants, people, animals, narrative can and should be able to change a site. What does it mean to design a liminal memorial, a non-permanent monument?

3. Site description

History

BC Hydro and the project of constructing large dams was conceived as an assertion of BC provincial autonomy. Premier WAC Bennett was known as a “BC Booster”, a populist leader who fiercely pursued a specific vision of BC’s future: a modern society supported by resource extraction (Loo, 2004). This vision was tied to a populist desire for autonomy; Bennett sought to withdraw from the economic integration and power-sharing arrangements with the USA Canada had initiated during WWII (Evenden, 2019). His provincial version of ‘resource nationalism’ (Desbiens, 2013) was also held in defiant opposition to the federal government’s perceived intrusion on provincial autonomy (Tomblin, 1990). WAC Bennett’s government carried out a vision of communication, transportation, and development across the province. Roads and railways would stimulate the twin interests of boosting rural and northern socio-economic development, and of stimulating private resource interests in the province. The problem of transport was particularly limiting in the Peace region, where the movement of mineral and forestry resources were prohibitively costly for industry (Matheson & Pollon, 2019). When Bennett first took office in 1952, settlement across the province was thin and sporadic; the frontier remained in sight. Bennett’s Social Credit government transformed the economy and landscape of British Columbia over 20 years. Their high-modernist approach of funding large-scale infrastructure projects exerted control over a thinly-settled frontier and welcomed private-sector resource exploitation into the province (Loo, 2004). Bennett’s approach to hydro development mirrors, almost predictably, the ideological bent of high modernists everywhere.

For W.A.C. Bennett, domesticating the province’s wild rivers was a way of imposing an efficiency on decadent nature. A free, running river was wasteful: water flowed to the sea where its energy was lost forever. Properly harnessed, however, a river’s energy could be put to work powering industrial development and expansion, the economic basis for Bennett’s new society. (Loo, 2004, p.163)

Bennet’s ‘Two Rivers Policy’ aimed to develop the Peace and Columbia rivers concurrently with the help of resource industry partners, notably the Peace River Power Development Company and Kaiser Aluminum. In 1954 Kaiser agreed to develop a storage dam on the Columbia river in exchange for a fifty-year water license (Loo, 2004). Ottawa quashed the deal, wishing to retain its jurisdiction over international waterways. The federal government was broadly critical of the ‘Two Rivers’ plan, taking the position that funding to build the necessary infrastructure would be difficult to secure (Tomblin, 1990).

In 1961-62, Bennett's Social Credit government acquired and merged two private electric utility companies, BC Electric and the BC Power Commission to form BC Hydro. This was a move approved of by both the ruling conservative Social Credit party and the socialist opposition. Bennett's vision was one of "capitalism by the people" (Pioneers, 1998, p.135). In the same year, Canada and the USA negotiated the Columbia River Treaty, which continues to regulate power sharing and flood control along this international river. Bennett inserted himself into the heart of the negotiations, and aggressively pursued provincial rights to flood control payments from the USA, and cross-boundary power sales. The hydroelectric potential of the Peace River was good leverage: Bennett could argue that his province didn't need dams on the Columbia to power the province and would walk away from the Treaty if his demands weren't met (Pioneers, 1998). The upfront payment (\$274 million) from the USA was awarded to BC, and this was used as capital to develop the WAC Bennett dam in addition to three dams on the Columbia. Construction on the Bennett dam began the following year.

BC Hydro's mandate in the 1960s was to provide surplus power to support the Premier's vision of building a stronger resource- and industry-based economy. Their marketing campaign to domestic consumers was aggressive and effective as the corporation sought to justify the costly development of additional dams. Domestic consumption of energy increased as much as 17% in one year (Pioneers, 1998).

WAC Bennett dam

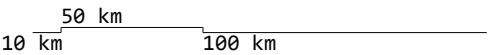
The WAC Bennett dam and Williston Reservoir are located in the Rocky Mountain Trench of northeastern British Columbia. This 1,500km fault extends from Montana to nearly the Yukon. Its flat valley bottom ranges from 3 to 20km wide. The Trench is walled in by the Rocky mountains to the west, and the Cassiar, Omineca, and Columbia mountains to the east. Tsekehne territory is almost entirely contained in this formation. The land is richly vegetated with subalpine fir, lodgepole pine, white and black spruce, and boreal plants. Mountain caribou migrate through the alpine. Moose, wolves, wapiti, black bears and grizzly all reside here (Clague & Wilcox, 2017).

The WAC Bennett dam was, at the time, one of the largest construction projects in Canada, preceding the mega-dam era in Quebec that would start with the James Bay projects in 1971. The site was known by surveyors as 'Site A', with the Peace Canyon dam 'Site B', and 'Site C' as the project currently underway downstream.

Williston Reservoir

Williston Lake, the reservoir created by the dam, was cleared prior to flooding with a budget of \$5 million by the Forest Service Branch (O'Riley in Kovance, 2017). Outside estimates, based on the costs of clearing previous reservoirs in the province, ranged from \$100 to \$300 million (Sims, 2017).

Williston Reservoir



This low-balling yielded a hurried and incomplete result. The poor clearing of the reservoir alone has had long-lasting implications for people who use the Peace River, notably the Tse'kehne communities whose freedom of movement was curtailed by the reservoir (Sims, 2017).

The environmental standards and practices when Bennett was built were pretty limited. There are some awful images of the way the reservoir was cleared, and in many cases it wasn't cleared. The trees were just left. In other cases, standing trees were just knocked over en masse with chains stretched between bulldozers and dragged through the woods. The consequence of all that is that the reservoir was choked with debris for many years and it was very difficult to travel on. (O'Riley, quoted in Kovance, 2017)

The fields of timber debris left by poor clearing practices was almost impossible for wildlife to navigate (Matheson & Pollon, 2019). It is estimated that 12,500 trapped moose were killed by the rising waters. The banks of the reservoir eroded dramatically over the first decade, contributing further to the thick expanse of debris on the water's surface. In 1968, 34,000 acres of debris floated atop the reservoir (Matheson & Pollon, 2019). 1,770 square kilometres of land and river were drowned.

The building of the WAC Bennett dam and the flooding of Williston Reservoir were world-changing events for the Indigenous communities in this part of the Trench. Tse'kehne scholar Daniel Sims' relates that, prior to the flood, Tse'kehne people lived lives unencumbered by colonization. This part of British Columbia was still considered the frontier, and various attempts by settlers to develop the area had been unsuccessful. Tse'kehne people had plenty of contact with settlers, but none of this had infringed on their movements or territory. The building of the dam and the flood were the first, and devastating, experience Tse'kehne had of the state's refusal to recognize their claim to land. Though the province claims all bands were notified of the dam, members almost unanimously state that they did not understand the extent of the changes to come (Sims, 2017).

Tse'kehne is a single nation. Prior to the construction of the dam, they comprised three bands: Ingenika, McLeod Lake, and Fort Ware. Now, after the disruption of the flood and the ensuing upheaval, there are three First Nations in the Trench: Tsay Keh Dene, McLeod Lake, and Kwadacha. Familial relationships between the communities were strong and the bands enjoyed frequent contact accomplished by river travel. One of the pernicious effects of the flood was isolation: travel by water became difficult if not impossible, and each community was forced to grapple with very different circumstances. All of the bands lost reserve land in the flood, and the Ingenika band who resided at Fort Grahame lost their entire community: homes, graveyards, belongings. After this, the bands were confined to reserves. During the process of clearing the reservoir, the Forest Service constructed logging roads around the reservoir.

These roads made the surrounding mountainsides accessible to logging companies. Before this, the cost of extracting timber would have been prohibitive (Sims, 2017). Shortly after the flood, intense logging began on the territory and continues to this day (Pollon, 2017). The influx of settlers and the sudden regime of extraction in the territory was combined with systemic efforts to exclude Tsek'ehne from the mainstream economy. The outcomes of this have been destructive and sustained. Substance abuse, for instance, was unheard of prior to the dam (Sims, 2017).

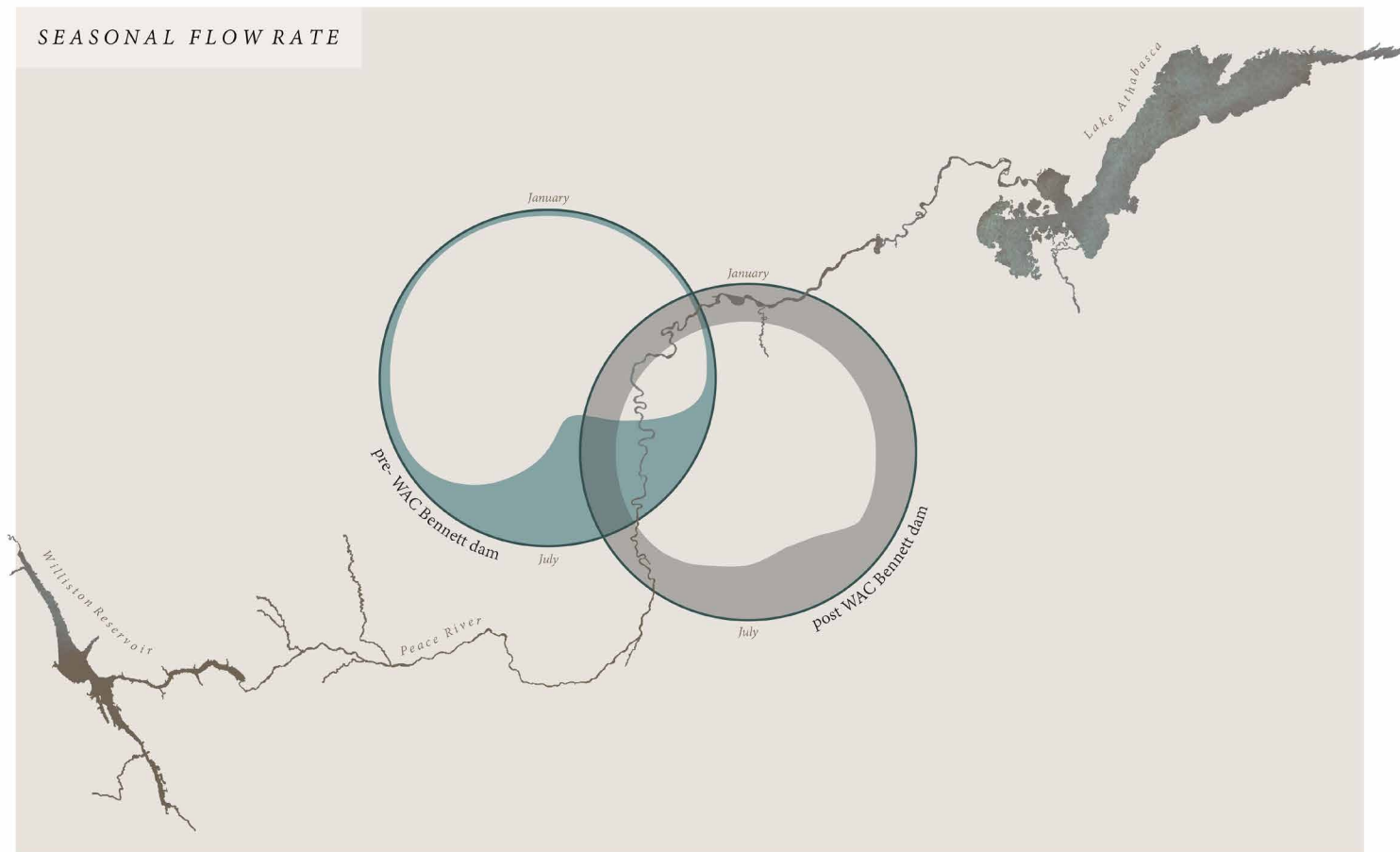
The Tsek'ehne community of Tsay Keh Dene still relies on diesel generators for electricity. Compensation for lost lands and livelihoods has been inadequate for some and slow to come or entirely absent for others. Daniel Sims estimates that 49 Tsek'ehne lost their lives in ways directly attributable to the dam (2017).

The reservoir also had profound effects on water quality and aquatic ecosystems. It is commonly understood that flooding a vegetated landscape results in a spike in methylmercury that gradually declines as decomposition takes place. The geology of Williston Reservoir's watershed is high in mercury, which contributes to a spike in mercury that has not diminished as is common in other reservoirs. Coliform levels also remain elevated in the reservoir (Sims, 2017).

The drastic changes to aquatic habitat have changed the species occurring in the reservoir. Arctic grayling, lake trout, mountain whitefish, and rainbow trout are rare or absent. Bull trout, lake trout, lake whitefish and peamouth chub have replaced them (Sims, 2017). Kokanee salmon, once nearly unheard of in the river, are now common in the reservoir, and elders recount how the spawn and die-off "ruins the water" (Sims, 2017, p.426).

Since the flood, Tsek'ehne elders have noticed the ways that the reservoir has changed the weather in the trench. High winds across the expanse of water generate dust storms at low water in the spring time that BC Hydro has attempted unsuccessfully to mitigate. The water levels in the reservoir fluctuate by an average of 12 metres every year, and this variation results in a band as much as a kilometre wide of abiotic, sandy, eroding shoreline. The community of Tsay Keh Dene (who settled at the head of the lake in the 1980s) has experienced thick dust storms and air quality problems (Pollon, 2017). These winds are sometimes strong enough to fell trees and damage houses. The dust storms cover berry patches and other food sources for both people and animals. The dust contains all the sediments that settle into the reservoir, including pollutants and the herbicides used by BC Hydro (Sims, 2017). Proposed solutions to the dust storms have included sprinklers, revegetating the reservoir bottom, an artificial island to divert the wind, and allowing less drawdown in the reservoir (Sims, 2017).

Downstream



Effects are also felt downstream from the dam. The Peace-Athabasca delta in Cree & Chipewyan territory is one of the world's largest inland deltas. The silty rivers, at their terminus, deposit nutrients into the delta and Lake Athabasca. The seasonal surges in water volume maintained a specific hydrological regime supporting a collection of rare and beautiful northern ecologies. The Peace river is particularly crucial for maintaining the hydrologic regime. The recharge of the delta's perched lakes, which lie above Lake Athabasca's water table, rely on seasonal flooding coinciding with ice jams in the Peace river. At peak flow the Peace checks the rate at which water from Lake Athabasca drains northward, maintaining water levels in the lake. In 1968, the waters receded in July and did not flood again for three years. 38% of the area's surface water and 36% of its shorelines had disappeared. More than 125,000 acres of mud flats became exposed and plant succession proceeded unchecked. The Peace-Athabasca Delta Project Group, an initiative of the federal government along with Alberta and Saskatchewan, released a report on the state of the delta in 1972 in response to these changes. It concluded that the changes in the land were a direct consequence of the WAC Bennett dam, and that this infrastructure controlled 50% of the river's flow, retaining 75-85% of annual snowmelt each year to refill the reservoir (Matheson & Pollon, 2019).

CONTEXT MAP:
British Columbia



4. Programmatic Issues: Site C

The WAC Bennett dam is upstream of Site C, literally and figuratively. It is impossible to understand the context of Site C without insight into the circumstances and conditions of the WAC Bennett dam.

The Bennet dam's still-unravelling effects are a glimpse into the future of Site C. If completed, Site C will mirror the ecological conditions of Williston reservoir, the changes in weather, and the impoverishment of aquatic and floodplain ecosystems. These problems are nearly intractable. They require interventions of monumental scale. Attempting to solve these large, structural problems with sweeping technofixes risks reproducing the ideology that produces dams in the first place.

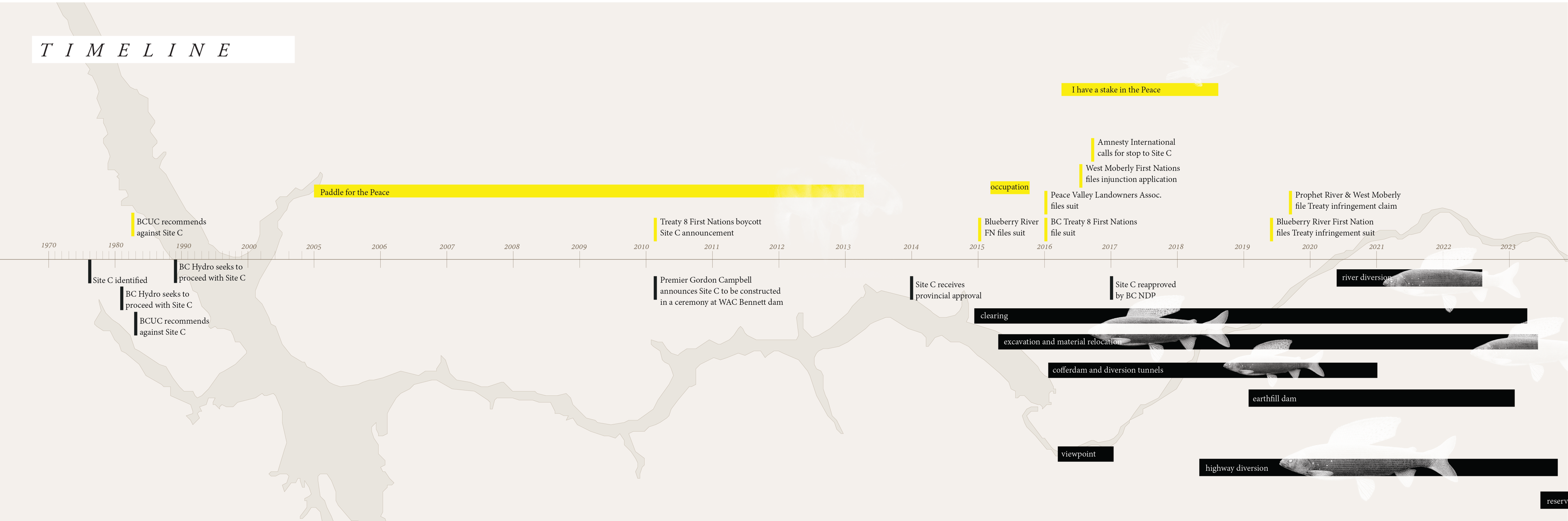
The WAC Bennett dam was built prior to any notion of environmental assessment, dramatically altering the hydrology of the Peace without documentation of existing conditions. When the EA for Site C was undertaken, the baseline conditions being measured against possible changes were those created by the Bennett dam. The cumulative effects of both dams on the river were never considered. This is a literal example of the phenomenon of shifting baseline: ideas about what is 'normal' or expected change as conditions change, and what once was is forgotten. Cumulative impacts are not often included in the EA process in Canada; despite the fact that a pre-WAC Bennett dam landscape is still within living memory, this data is not part of the official documentation of the Site C ecological and impact assessment processes. Though environmental assessment is an important step in the regulatory process, and has the potential to contribute to more just outcomes, the process is often hobbled by gaps and regulatory capture. For this reason and others, local and personal memory is an important reservoir of data about how the land used to be.

Site C is different from the Bennett dam in some notable ways. Firstly, Site C is still under construction, and still being protested. Objections and resistance to the dam are highly publicized, even commanding the attention of international organizations like Amnesty International. Where the Bennett dam affected (and continues to affect) a relatively small number of marginalized, overwhelmingly Indigenous people, many high-profile activists, academics, and politicians have implicated themselves in the fight against C.

The fight against Site C has also yielded some examples of alliance- and relationship-building between First Nations and Canadians. Many of the fundraising and protest initiatives are joint efforts. Settlers and First Nations are both, though not symmetrically, implicated in resistance.

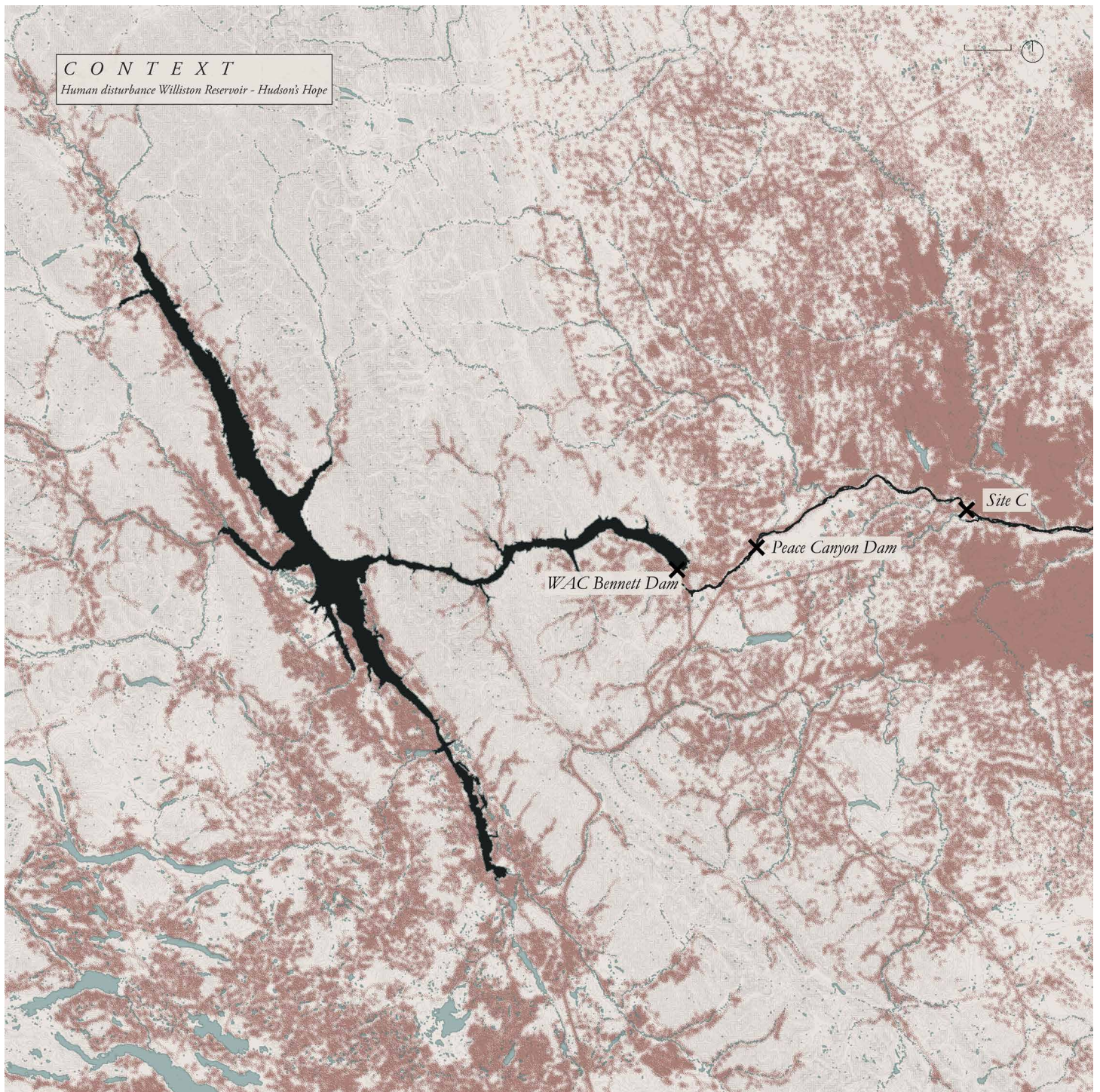
For these reasons, Site C offers a wider opening for the kind of interventions speculated upon in the previous essay. The political / cultural context of Site C is more accessible to me, the designer. To a limited extent, I am connected to Site C in a more immediate way via my own culture and politics. The Bennett dam, and its effects on Tsekhene people, are so removed from my sphere of insight that it felt irresponsible to editorialize via design. The following design proposals focus on Site C.

T I M E L I N E



Site C was first identified in 1976, and is scheduled for completion in 2024. The river is set to be re-routed through diversion tunnels this coming September. For decades, citizens, land protectors, and resisters have worked hard and creatively to stop the construction. Treaty 8 First Nations have launched a heroic number of legal challenges. Artists, landowners, and community members have all supported and fundraised. The provincial government insists Site C is necessary to meet emissions reduction goals. The urgency surrounding climate change complicates the question of what is good, bad, and inevitable in this situation.

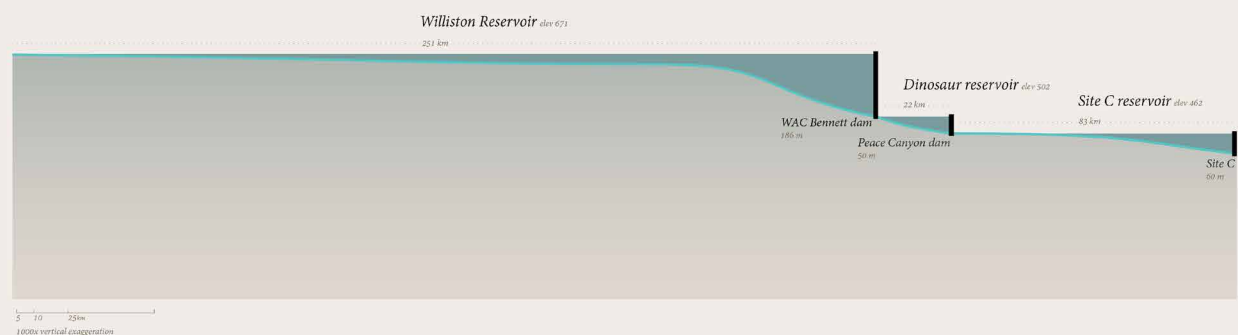
Regardless of these tensions, the loss facing residents of the valley is real and desperate. Anticipating the filling of the reservoir feels a little like anticipating the end of the world. It's hard to imagine what comes after for this Valley.



The Peace River Valley is hemmed in on all sides by development and extraction (seen here in red), one of the only remaining protected corridors of habitat in Northeastern BC, and the slimmest portion of the Yellowstone to Yellowknife corridor. The BC First Nations located east of the Rockies are inundated with extractive development, mostly forestry and fracking. The Peace Valley is an oasis of intact landscape.

PEACE RIVER

elevation diagram



Though this valley is precious to the people who rely on it, as well as ecologically significant, it is not untouched. The Peace River and the ecologies reliant on it have already been fundamentally changed by two upstream dams, the WAC Bennett dam and the smaller Peace Canyon dam. This makes the Peace Valley all the more precious; it is the last stretch of the Peace River in BC that has not been drowned in a reservoir.

redacted



The Valley is a special place. The north bank slopes up from the river in a series of terraces protected from prevailing winds. Deep alluvial soils and a sun drenched aspect create rich agricultural lands. The unusually warm and sheltered valley, located just east of the Rockies where the Peace flows into the Prairies, is an ecological meeting ground. Extraordinary biodiversity exists here.

Before the upstream dams, spring freshet flooded the lower terraces. Currently, river volume at freshet varies from the annual median by about 5%.

redacted

Burial grounds, medicine picking, berry spots, traplines, hunting places, family connections, livelihoods, and memory are all embedded in this landscape. The Peace River Valley is one of the last remaining intact places to practice Treaty 8 rights in BC. Cultural knowledge lives and is transferred between generations at specific places on the landscape. Peace Valley farmers like Ken and Arlene Boon work the same land as Arlene's grandparents. The old growth cottonwood that laces the valley bottom is critical habitat for nesting and migrating songbirds. Moose mothers calve and rear their young in the protection of the green islands. There is so much of the future at stake here.

The impact of these changes on plant, wildlife, and human communities was dramatic. Plant communities, waterfowl habitat, and muskrat populations were decimated. “Even the frogs left the country. No water” (Ladouceur, quoted in Matheson & Pollon, 2019, p.241). Goldeneye, walleye, and lake trout suffered. Navigation required dredging of channels in the Athabasca river. These changes damaged lifeways and economies in the Delta region; people had for generations relied on a combination of trapping for the fur trade, hunting, and fishing (Matheson & Pollon, 2019).

“as a way of seeing, the power trench sacrifices depth for breadth; its wide angle of vision reduces complexities and erases differences that are apparent at other scales” (Loo & Stanley, 2011, p. 404).

The synoptic view does not indicate expertise; BC Hydro did not anticipate the objections (and lawsuits) directed by communities affected by the dam. These oversights expose the hubris of high modernism. “The surprise was caused primarily by a lack of understanding of fluvial dynamics.” (Matheson & Pollon, 2019, p.243)

5. Design methodology

My design process will focus on the site as a both a structural and ecological restoration and as a narrative, memorial work. The scale of the site could be anywhere from the Peace river system to just Williston reservoir, or a portion of it. Taking inspiration from Yan's 'reviving the 30 metres' and Lin's 'confluence project', I will iterate on a series of sites.

Both the site selection and design process will focus on the notion of de-weaponizing (with thanks to Zoe Todd, 2016) the relations disrupted by Bennett Dam. This will entail a detailed material investigation of the site, and the relationships between material agents and human and more-than-human beings.

My priorities in the design process will be 1) de-weaponizing the materials and beings appropriated by the dam and 2) memory work that grapples with the difficult history of settlement and extraction in the Rocky Mountain Trench.

Areas of further research include ecological restoration of riparian zones; dam removal mechanics and history; and counter-monumental and memorial work.

Options for proposed designs include:

- Water drawdown harmonization with Site C to reduce water fluctuation in Williston reservoir and aid in lake recharge in the Athabasca Delta, paired with restoration of the riparian zone;
- Terraces to stabilize shoreline and protect vegetation from dramatic water level changes in Williston Reservoir
- Dam removal
- An alternative visitor's centre
- Shoreline treatments like floating islands
- Artificial island construction to baffle wind
- Memorial sites along the Peace

6. Design proposal

TOPOCIDE

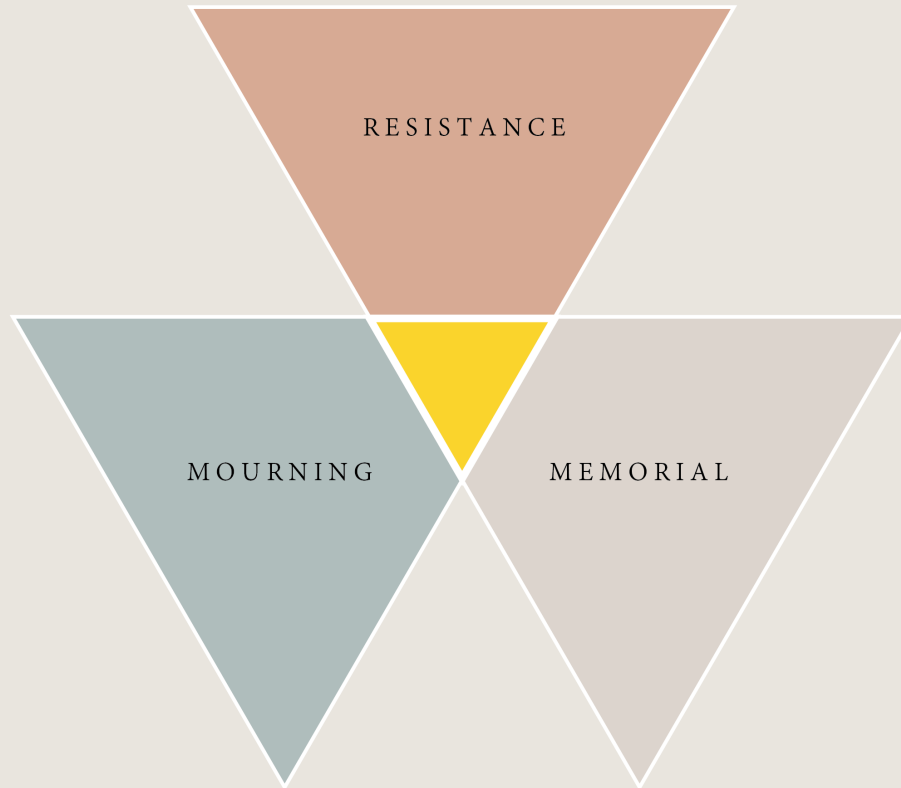
We live in the age of the mountain removers, the river rerouters, the forest erasers. Landscapes are routinely destroyed or changed irrevocably by human activity. Sometimes these changes are cataclysmic, and sometimes insidious. To adapt to these changes, human beings must conceive new personal and collective rituals of grieving and memory. This project develops strategies for mourning and memory in the age of topocide.

Topocide engenders grief that is at once personal, collective, and political. The loss of landscape is a traumatic experience. The psychological impact can be acute as well as lasting, especially when the loss is accompanied by displacement. Feelings of powerlessness and violation can arise, sensations that are the underpinnings of lasting trauma. Loss of landscape can mean the loss of home, loss of livelihood, loss of culture, and loss of identity. These impacts can be experienced both individually and collectively.

So far, the effects of the environmental and extractive crises have been possible to ignore for many. This will not always be the case. How can we live through dramatic environmental loss and still bear to remain emotionally connected to place?

The strategies developed in this project draw from three practices: memorialization, ritual, and resistance.

CONCEPTUAL DIAGRAM



Mourning is a process of meaning-making, and a necessary response to loss. Mourners must shift their relationship to the lost beloved to one that exists internally and arises from memory. Ritual is a cultural technology that has supported people through this process for millennia.

Memorialization facilitates collective memory. Collective memory practices are important in the age of topocide; without them, we lose track of the changes that have occurred, and the diminishment of the world around us becomes invisible. We lose touch with the trends and velocity of loss and with the world our ancestors lived in without the cultural memory to imagine other ways of living. Memories of lost landscapes are maps to the future.

Memory and ritual are both expressions of value. Mourning and memorializing a lost landscape pushes back against the dominance of the industrial landscape; it asserts the value of what has been lost.

In the age of topocide, resistance is intertwined with the loss and grieving of landscape. When the destruction is committed by industry or the state, these losses are legitimized as productive use for the common good. Land protectors are criminalized and those who grieve are isolated in their grief. No memorials or monuments are erected for lost homelands, ecosystems, mountains and rivers. No state funerals or parades are held. The result is a kind of disenfranchised grief: a grief that is not broadly acknowledged, socially validated, or publicly mourned.



Ken Boon poses with homemade Rocky Mountain Fort heritage sign

The strategies developed in this project are land-based rituals for memory and grief, rooted in care and commitment for the land. By design, they require few resources. They capitalize on the agency of the people most affected by the loss of landscape, and not on state actors.

This project addresses the Site C dam and the loss of landscape underway in the Peace River Valley as a result. Acts of resistance to Site C are reinterpreted as landscape-based rituals of grief, memory, and reaffirmation of care for the river valley. As mourners assemble meaning from the loss, memories are framed by resistance to the dam, love for the valley, and the agency of the land defenders, rather than simply loss and defeat.

“Mourning is about dwelling with a loss and so coming to appreciate what it means, how the world has changed, and how we must ourselves change and renew our relationships if we are to move forward from here.”

Donna Haraway

Storage dams create profound and expansive change in the landscape. This project seeks to address the damage that Site C has done and will likely do, but it is not a restoration project. The ecological problems posed by the dam, like the impoverishment of aquatic ecosystems, erosion along hundreds of kilometers of shoreline, and human and animal consumption of methylmercury, require interventions of an almost unimaginable scale. Instead of attempting a fix, this project toys with Donna Haraway’s notion of ‘staying with the trouble.’ How are we to remain emotionally connected to the places we love when faced with devastating changes that we may not be able to stop? How are we to imagine a future beyond the apocalypse?

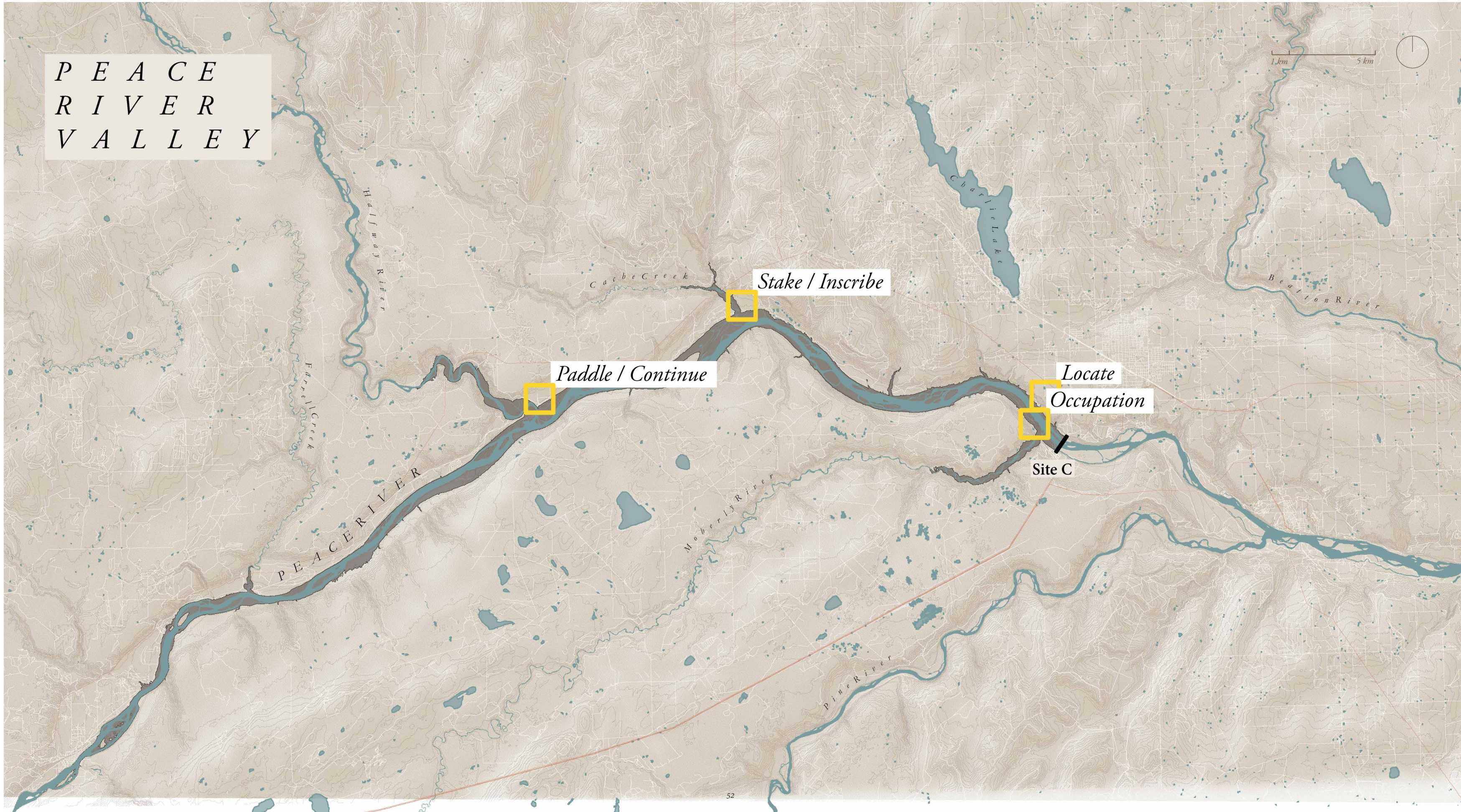
T I M E L I N E

continue / locate / inscribe

Even if the dam is completed, there will be a future. Entitled Continue; Locate; and Inscribe, the proposals in this project imagine a future for this valley that is defined by the resilience and commitment of the people who love it. The notion of commitment to landscape has a precedent in the spirit of Treaty 8: a commitment to the land that lasts as long as the sun shines, the grass grows, and the river flows.

These proposals are an attempt to refute some of the logics at work in developments like Site C: they are small scale, distributed, processual, simple, low-cost, and reliant on local knowledge. Unlike the singular, ultra-durable monument that is a dam, these interventions depend upon the participation of local people. They are only visible as long as the memory of resistance to Site C is actively maintained; at the same time, they are devices to facilitate the maintenance and transmission of memory. Finally, these interventions are intended not to be universally accessible. They are designed to maintain community control over their story and collective memory.

PEACE
RIVER
VALLEY



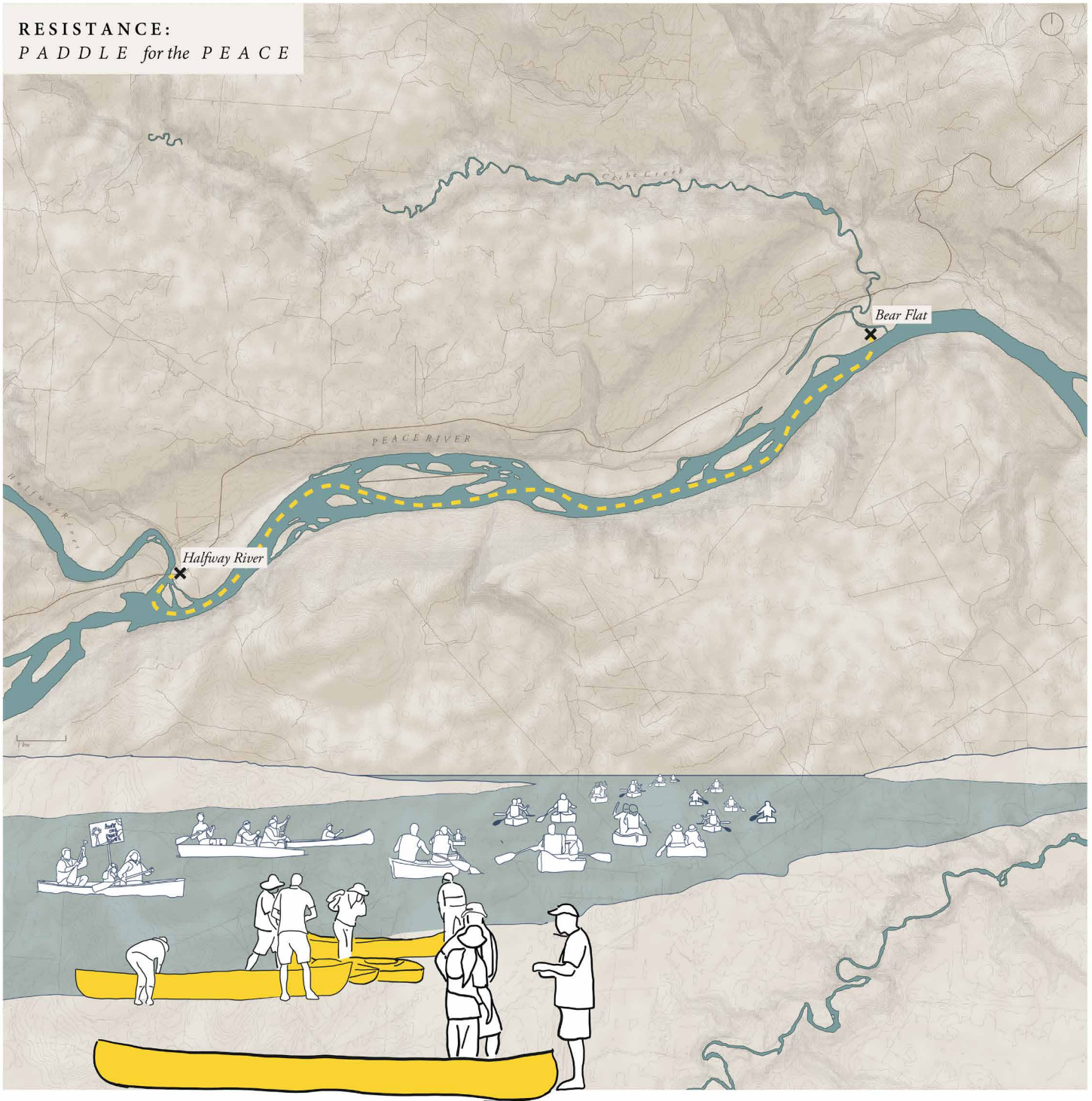
Paddle / Continue

Stake / Inscribe

Locate
Occupation

Site C

RESISTANCE:
PADDLE for the PEACE



Paddle for the Peace was an annual event organized by the Peace Valley Environment Association and the West Moberly and Prophet River First Nations. It ran from 2005 to 2018, and hundreds of people participated each year. It was a celebration of a beautiful, beloved, and threatened place, and a fundraiser for lawsuits opposing Site C. The paddling route was roughly 16km, running between the Halfway River and Bear Flat. A ticket cost \$10 and included breakfast and lunch, and a shuttle bus.

The Peace River will soon be closed to boat traffic in the vicinity of the dam.

redacted

Continue seeks to resist the discontinuity of displacement. This ritual proposes a walk between Halfway River and Cache Creek along highway 29. The route echoes the original paddling route of about 16km. Paddles are carried as a symbol of continued care for the river valley.

Walkers will assert their continued presence and care for the Valley in the face of forced displacement. This ritual is highly visible. Its meaning is “We are still here, and we will be here when the dam is gone.”

redacted

This program requires careful logistics planning, including pacer and safety vehicles, provisions, shuttles, and marshalling. Water breaks and pit stops should occur every 2.5 - 3 kilometres. Pacer vehicles carry water, food, belongings, first aid materials, folding chairs, blankets, and other necessities. These vehicles should follow and precede the walkers closely with hazard lights blinking.

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PEACE
RIVER
VALLEY

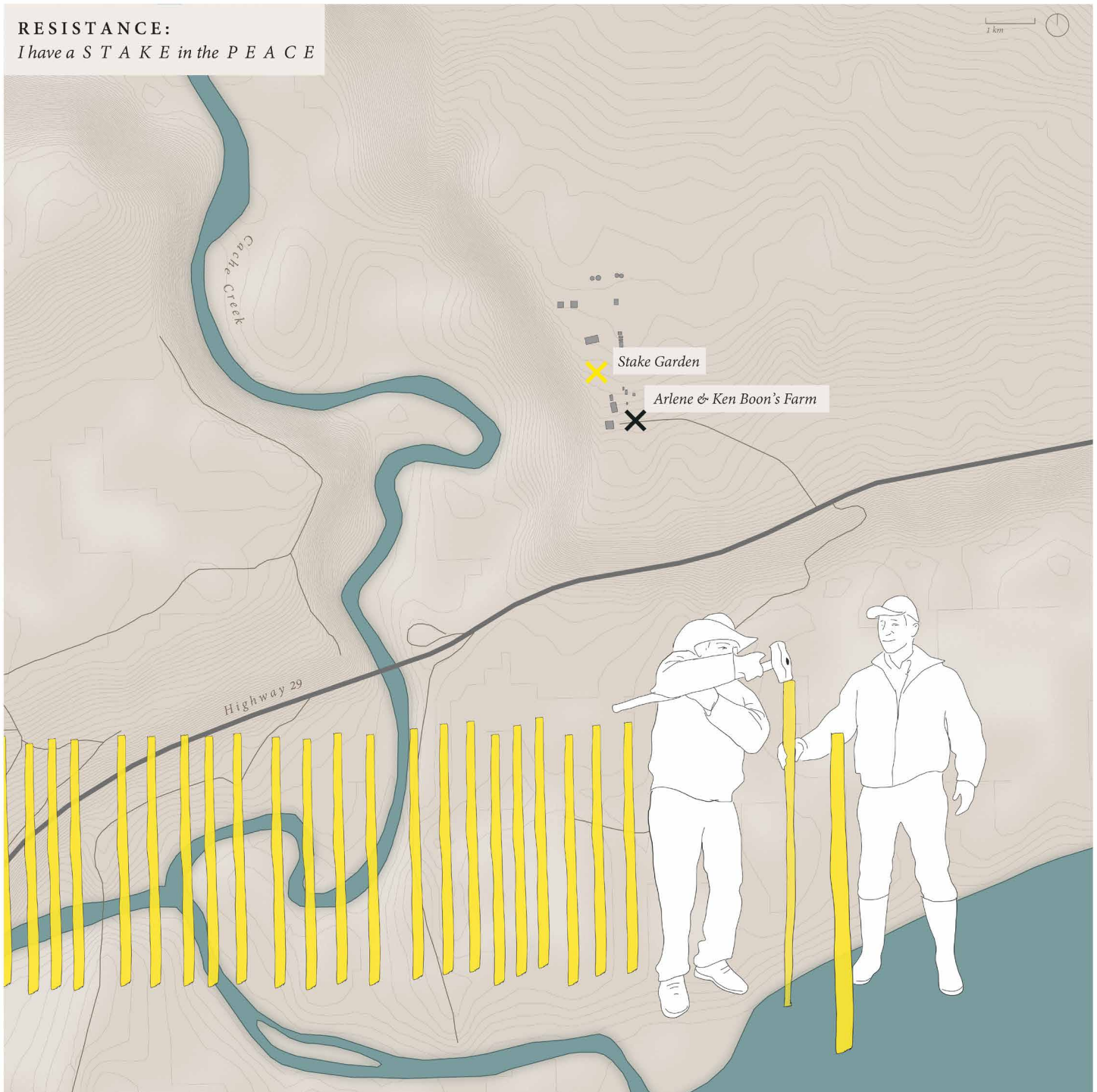


Stake / Inscribe

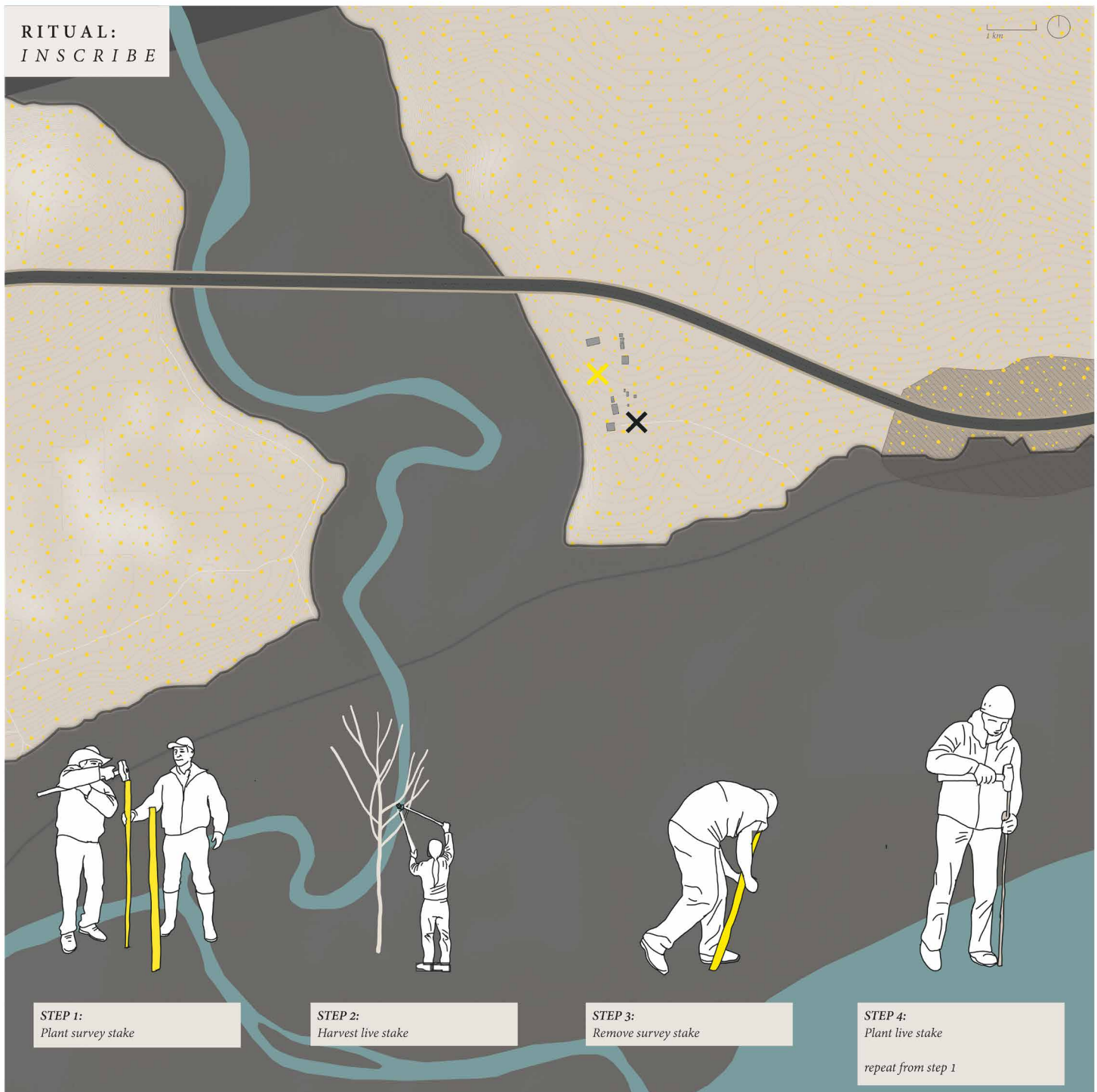
Site C

RESISTANCE:

I have a S T A K E in the P E A C E

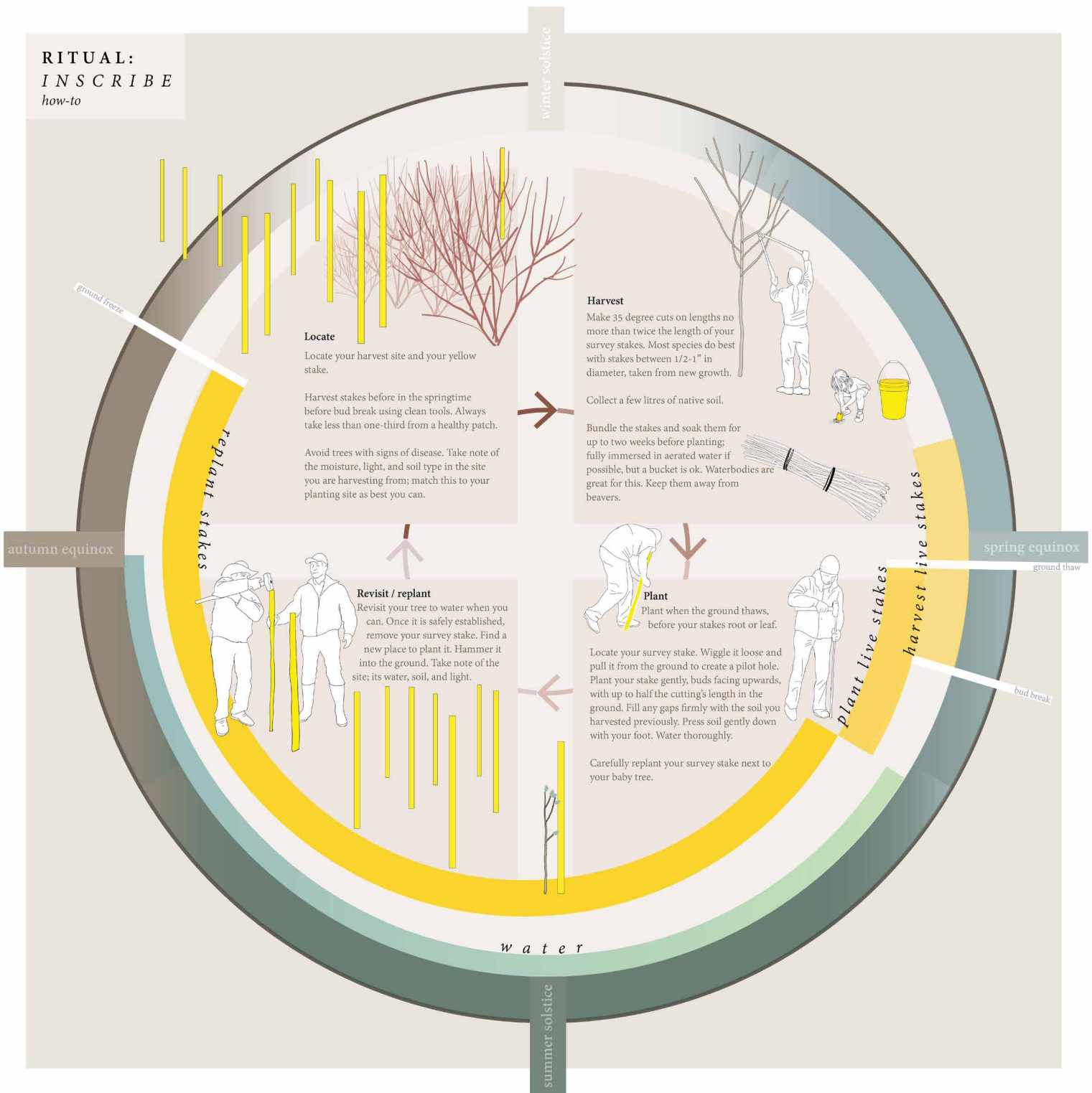


Friends of the Boons transformed the act of pounding a stake into the ground into a fundraiser and counter-assertion of claim. For \$100 supporters could purchase a stake, inscribe it with a message, and have it pounded into the Boons' property. Proceeds went to support the legal costs of lawsuits. A garden of hundreds of yellow stakes grew up over three years; the rejection in 2019 of West Moberly and Prophet River First Nations' application for a stop-work injunction put the campaign on hold.



Memory scholar Claire Colebrook (2018) describes the Earth as an archive, and the Anthropocene as inscription that compromises the Earth's ability to hold memory. Site C is an inscription that erases, literally and symbolically, memory from the landscape. Inscribe is a constructive ritual of mark-making, beginning where 'Stake in the Peace' leaves off. This ritual reasserts agency and continued care for the land, inscribing the memory of these convictions for successive generations.

RITUAL:
INSCRIBE
how-to



Inscribe follows a seasonal rhythm. Mourners continue to write messages on survey stakes and plant them in the ground. In early spring, they harvest living stakes from appropriate tree species, return to their survey stake, uproot it, and plant their living stake in the pilot hole. The cycle begins again as a new site is selected and the survey stake is replanted.

On the following page, six species native to the Peace River Valley are shown that are viable for live-staking, as well as their site requirements. This planting palette ranges from moderately dry to flood-tolerant, and all thrive in the intensely sunny conditions of the valley.

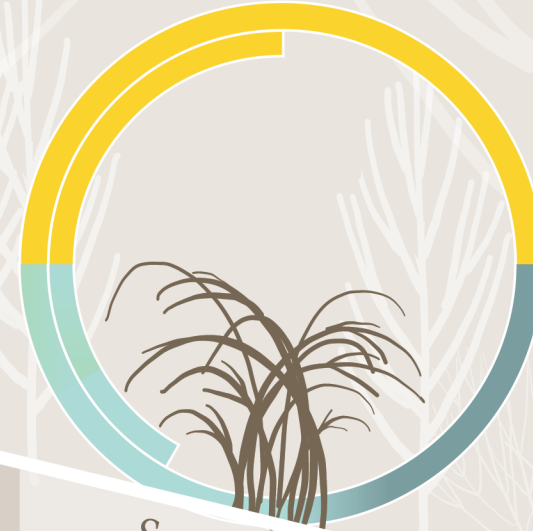
INSCRIBE

planting list



Trembling Aspen

Trembling aspen grows to be a medium-sized deciduous tree, often cloning via underground runners. It requires moderately moist, well-drained soils and full sun. It will thrive in rocky to loamy soil types.



Snowberry

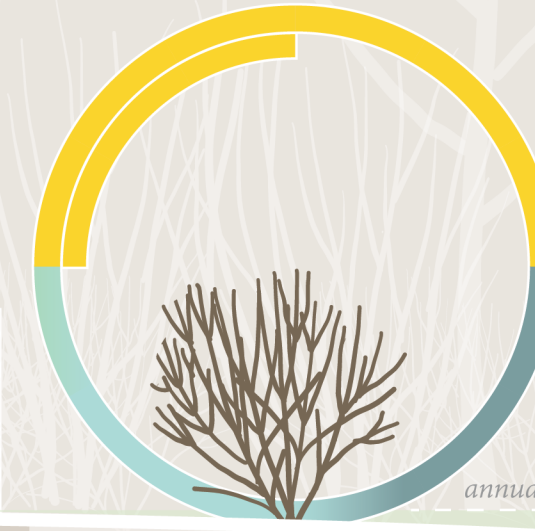
Snowberry is a small shrub bearing persistent white fruits. It grows in a variety of moisture and soil conditions, but prefers part sun to full sun. Snowberry does not root as readily as other species suggested, and would benefit from the application of rooting hormone to ends of stakes immediately before planting.



Red Elder

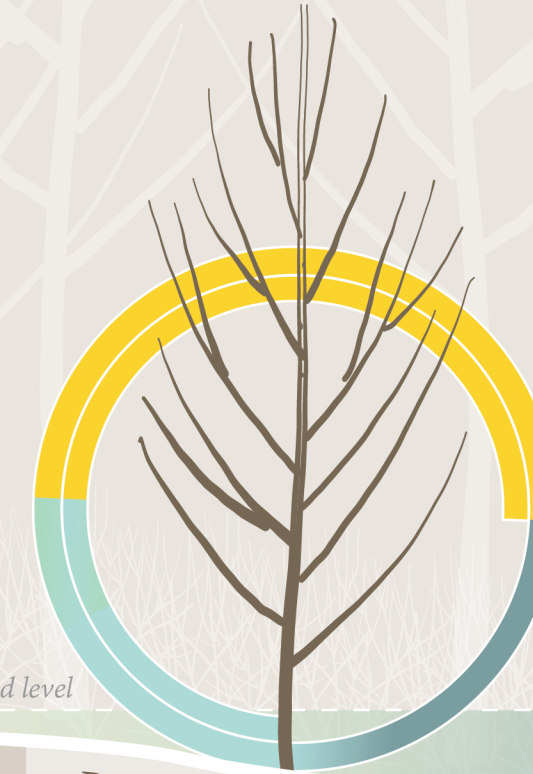
Red elder is a medium sized multi-stemmed shrub, often growing under canopy openings in swampy woodlands.

Red elder will tolerate a range of different soil types and moisture regimes, but prefers rich, well-drained, moist soils. This plant requires direct sunlight. Red elder benefits from the application of rooting hormone to cut end prior to planting.



Red-osier Dogwood

Red osier dogwood is a multi-stemmed, spreading shrub with bright scarlet to chartreuse stems. It requires consistent moisture, but is flexible about soil type. This plant loves full to part sun and is often found growing in open, wet woodlands. It does not require rooting hormone.



Balsam Poplar

Balsam poplar thrives in riparian flood-plains, but will tolerate moderately dry sites and a fluctuating water table. These stakes can be quite thick, from 1/2" in diameter up to 10 cm. Thicker stakes benefit from soaking until wood is saturated; this provides a reservoir of moisture once the stake is planted. There is no need to use rooting hormone.



Willow spp.

There are dozens of willow species in the Peace River Valley. Willows are notoriously hard to identify in the field, as they hybridize readily. All willows in the Valley are flood-tolerant and moisture-loving. Scouler's willow tolerates the driest conditions of all, but still requires consistent moisture. Willows produce abundant rooting hormone in advance of leafing, and root easily. All willows are shade intolerant.

redacted

PEACE
RIVER
VALLEY



Rocky Mountain Fort was established in 1793 by Alexander Mackenzie on his first excursion west of the Rockies. The fort eventually housed voyageurs of the North West Company and later Hudson's Bay. These voyageurs developed trade relationships with surrounding Indigenous communities. The fort became a kind of community in itself; the terrace on the south shore of the river held both the fort and numerous lodges.

The site itself was largely unheralded until the 1980s; it was never comprehensively studied or surveyed, and the Indigenous history of the site was particularly overlooked.

Rocky Mountain Fort held important pieces of the shared story of a post-contact but pre-colonization Peace River.

The site is directly upstream of Site C and the mouth of the Moberly River.

RESISTANCE: OCCUPATION



On New Years' Day, 2016, after weeks of preparation, a number of Site C protestors, both Indigenous and non-Indigenous, began their occupation of Rocky Mountain Fort to prevent BC Hydro from logging the riverbank, lined with old-growth cottonwoods pre-dating Mackenzie's arrival. On March 1st, BC Hydro filed a lawsuit against several participants and the occupation ended. The shoreline was logged and a retention berm holding acid-generating rock waste was constructed over top of the Fort site. This place has been effectively erased.

The ritual intervention *Locate* is situated across the river and above the site of Rocky Mountain Fort.

PEACE
RIVER
VALLEY



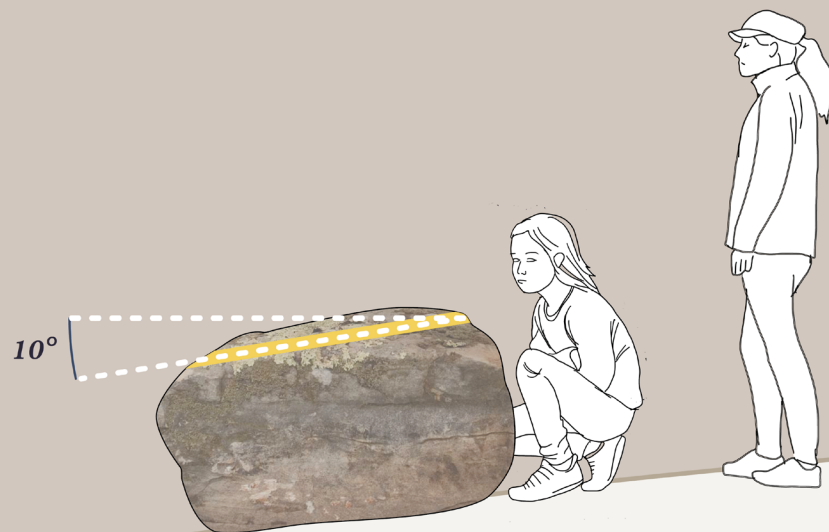
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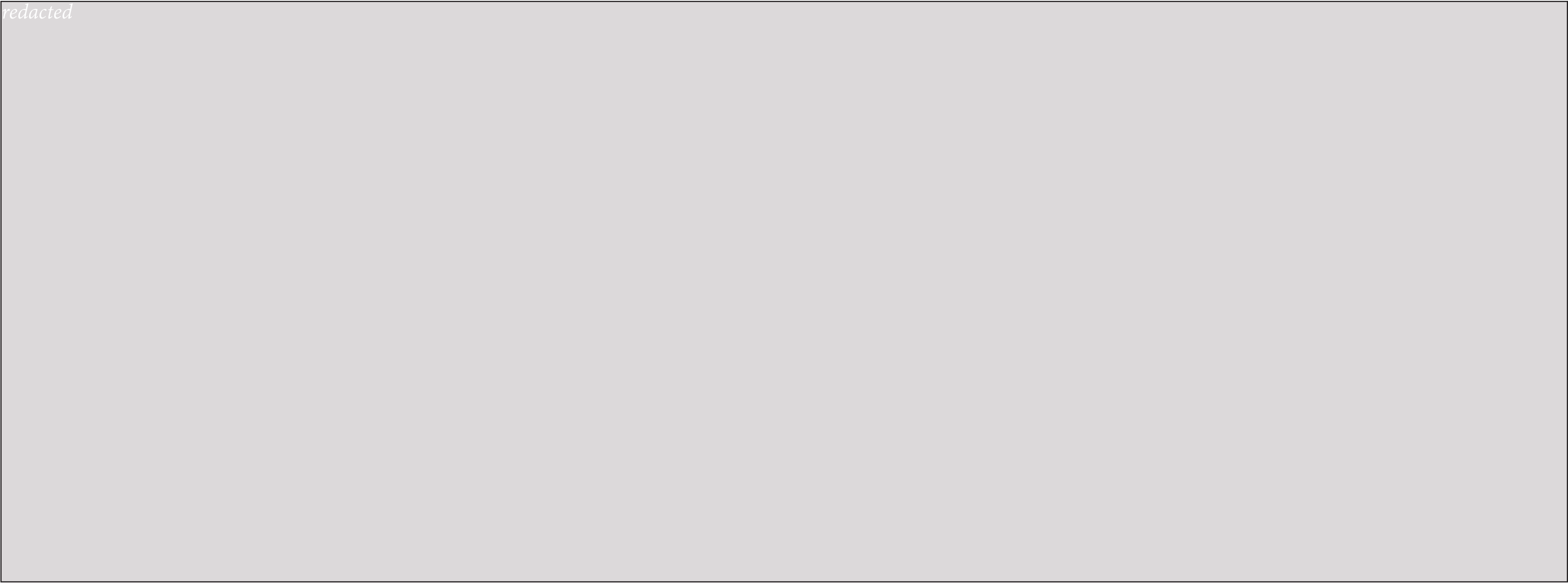
When landscapes are destroyed, memories, stories, and practices are dislocated. An elder from Kwadacha First Nation, commenting on the impact of the WAC Bennett dam on their homeland, described the disturbing feeling of remembering events and places but being unable to locate them on the physical landscape. Rocky Mountain Fort has been all but erased; the stories and memories carried by the living are still rooted in place. Once the dam is completed, the site will be underwater.

Locate offers a simple strategy to pinpoint the place that was, relocating memory in the new landscape. The site for this intervention is known as Protestor's Point. This is an overlook situated on land owned by Site C resisters. This viewpoint is one of the only places citizens can access an unobstructed view of Site C. Journalists, environmentalists, academics, and community members frequent this spot.

L O C A T E
sight diagram



Locate makes use of remnant stone from blast-excavation. A byproduct of this kind of excavation are rock fragments with the marks of drilled explosives channels. The rock fragment is positioned at Protestor's Point, with its channel functioning as a sight, pointing the viewer's eye directly at the location of Rocky Mountain Fort.



The distance is about half a kilometer, at an angle of about 10 degrees. Once the reservoir is filled, the sight will point at the inscrutable surface of the water.

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The ritual that accompanies this intervention is the sharing of memory. How will people communicate about what happened in the Valley to people who weren't there? This intervention, like the others, doesn't tell the story on its own, but supports the transmission of memory into the future.

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