

Shoreline Restoration/Resiliency Projects in SF Bay: An Opportunity for Improving Regulatory Efficiency

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Committee***

The over-arching goal of this paper is to facilitate a constructive dialogue amongst regulatory agencies, applicants, stakeholders, and other key interest groups as to the best means to improve the timeliness and effectiveness of permitting for shoreline restoration and resiliency projects around the San Francisco Bay. With greater emphasis (and urgency) on restoring ecosystems and improving the resiliency of our Bay shorelines, including the latest impetus provided by the recent approval of Measure AA, passage of the Proposition 1 Water Bond and its ear-marked funding of flood management and watershed protection, and worsening predictions of sea level rise, the need for a more expeditious yet effective permitting process for such priority integrated restoration/resiliency projects is paramount. This paper explores permitting approaches in other regions for ideas for improvement in Section 3, and makes a number of recommendations for improvement in the Bay Area in Sections 6 and 7.

1. Current State of Permitting for Restoration/Resiliency Projects Around the Bay

The passage of Measure AA by Bay Area voters in 2016 will serve as a major funding “engine” for shoreline restoration and resiliency projects for the next two decades. That’s the good news. The other news is that obtaining environmental permits and regulatory approvals for restoration and shoreline resiliency projects along and/or in the Bay has become in recent years an increasing challenge for public entities and private interests alike. In too many instances, being able to obtain the necessary environmental approvals takes at least as much time as it does to design and build a project – and can often take more time. Even projects for which there is widespread support can require an excessive amount of time to receive all of the necessary permits and approvals. Furthermore, despite their ultimate benefits to aquatic functions and services, restoration and resiliency projects can often still be required to provide costly compensatory mitigation. These unnecessary delays and requirements - and the inefficiencies that often underlie the permitting process - increase costs, waste resources, and too often do little to improve restoration and resiliency projects from an environmental standpoint, and in fact can make them less economically viable and in some cases less likely to be implemented.

a. Numerous agencies with overlapping jurisdictions, often conflicting requirements

Typically, there is an array of factors that contribute to unnecessarily bogging down the permitting process. There are numerous agencies with overlapping jurisdictions, redundant concerns, and sometimes conflicting interests involved, even if those interests are environmentally protective or educational in nature. For example, protection of sensitive wildlife habitat can conflict with public access provisions. Converting one habitat type to another (e.g. degraded seasonal wetlands to full tidal wetlands) can entail additional compensatory mitigation requirements that can in turn make the project less practicable or economically feasible. As another example, the San Francisco Bay Conservation and Development Commission (BCDC) typically requires that all other permits and approvals, except for that from the U.S. Army Corps of Engineers (Corps), be provided to them before they consider the application complete and hence begin their 90-day permit processing “clock”. More recently, the California Department of Fish and Wildlife (CDFW) has been extending their Section 1602 oversight into tidal areas around the Bay, adding an extra layer of complexity for permitting shoreline projects. Finally, potential changes being considered with respect to the Federal Clean Water Act definition of “waters of the U.S.” and the State Water Resources Control Board’s (SWRCB) corresponding changes to procedures for determining what constitutes “Waters of the State” have created significant uncertainty with respect to what is jurisdictional.

b. Multiple stakeholders

There are also typically multiple stakeholders involved in most water’s-edge or in-water “improvement” projects, including the general public, neighborhood groups, environmental organizations, and other non-governmental organizations (NGOs). Their input can be sporadic and less than timely as a project moves through the permitting process, causing or adding to delays and inefficiencies.

c. Scheduling/cost challenges

In addition to the timing and cost challenges associated with satisfying multiple agencies and stakeholders during the permitting process, Project applicants can also contribute to the problem by advancing an incomplete and/or insufficiently thought-out project, which then substantively changes during the permit application review process. This can create inconsistencies between permit applications working through different agencies that are in different stages of their respective reviews, which in turn can create confusion and the need to re-submit application packages. All of which can add significantly to costs and permit processing times.

Pertinent regulatory agencies are often understaffed to begin with and then, as the time required to process a permit application extends over many months or years, projects can experience one or more changes in personnel. This then requires that a new permit manager comes up to speed on the project and may forsake prior project agreements, or bring into the process different perspectives and approaches to how pertinent rules and regulations should be applied.

Finally, permit application/processing fees can often be the same as ‘traditional development,’ reducing cost-effectiveness or incentives for completing such restoration and resiliency projects. For example, BCDC charges its fee based on a percentage of estimated project construction cost regardless of what type of project it is.

d. The Paradigm Shift

While it’s undoubtedly true that natural systems have been and are always evolving, the acceleration of climate change and its resulting effects such as sea level rise, greater storm intensities and frequencies, and changing precipitation patterns have made these systems even more dynamic and challenging to address. Evaluating the condition and spatial extent of natural regulated resources along the shoreline, in light of these dynamics and when viewed with or without a proposed restoration/resiliency project, is a particular challenge in the regulatory context. Determining just what it is that is being permitted and what is being mitigated for is foremost among the challenges, making “adaptive management” the strategy of choice – and necessity - for effective resiliency planning. But just how to design an effective adaptive management strategy that not only ensures a successful restoration project but that also provides some level of cost and time-frame predictability for permittees has been elusive.

2. Shoreline Restoration/Resiliency Project Characteristics

a. The big picture

Stand-alone shoreline habitat restoration and enhancement projects continue to be carried out around the San Francisco Bay shoreline on a somewhat regular basis, particularly in the context of mitigation for single project impacts. In more recent years, however, such “single purpose” restorations have been increasingly superseded by comprehensive shoreline resiliency planning projects – particularly those that incorporate a “living shoreline” approach - with multiple benefits including flood protection, erosion control, water quality improvement, habitat enhancement, and expanded public access/recreational opportunities. Improving the resiliency of our shorelines has taken on greater urgency in the era of rising sea levels and climate change.

The American Shore and Beach Preservation Association in 2014 published a white paper that explored and described a comprehensive definition of resilience in the context of coastal systems¹. The ASBPA definition breaks down into three primary components: 1) Engineering resilience, which is the ability of an engineered shoreline to resist and recover from a given disturbance as compared to its design goals; 2) Ecological resilience, which is the ability of a natural shoreline to absorb change and disturbance such that it provides the same ecosystem functionality following the disturbance, and 3) Community resilience, which is the ability of human communities to learn from, re-organize and otherwise adapt to

¹ American Shore and Beach Preservation Association (ASBPA). 2014. *Resilient Coastal Systems and Community Planning*. Prepared for the ASBPA Science & Technology Committee. March 2014.

major disturbances. In an urbanized estuary such as SF Bay, all three components are essential elements of a resilient shoreline system.

b. Gray vs green shoreline infrastructure

Structural – or gray infrastructure - shoreline protections, such as seawalls and riprapped levees, remain important resiliency elements in locations where existing development makes other adaptation approaches impractical. Raising their height (and along with it their base) in response to future flood events and sea level rise may be the only viable solution in some instances. Nevertheless, installing such structures results in a permanent adverse effect (or ‘loss’) of habitats and/or ecological functions, and maintaining such structural solutions may also perpetuate the degradation of whatever shoreline habitat and recreational values remain.

Along less developed shorelines, employing a green infrastructure approach which makes use of wetlands, oyster reefs, sediment deposition and other natural systems in the context of a more geomorphic approach may often make the most sense. While such an approach can typically be designed to provide an overall environmental and ecological benefit, it is important to recognize it may also result in some adverse impacts beyond just those related to the initial construction. Such impacts could include displacing one habitat type (e.g., seasonal wetland) for another (e.g., tidal wetland) and/or favoring some sensitive species at the expense of others. Enhancing public access and recreational opportunities as part of a resiliency project – and thereby gaining greater public “appreciation” and support for further resiliency planning – can also conflict with protecting sensitive habitat features and/or species.

This white paper explores expedited regulatory approval approaches applicable to shoreline restoration and resiliency projects that employ a primarily green infrastructure approach but that also may include some key gray infrastructure components.

c. Shoreline stabilization and protection

Shorelines in their natural state are evolving, changing systems with a shoreline edge that constantly moves and adjusts to seasonal shifts as well as storm events. Such movement conflicts sharply with the inherent human need for stable and fixed boundaries (such as property lines). Consequently, structural approaches will tend to remain the solution of choice along heavily urbanized shoreline edges except where opportunities for some set-back or managed retreat exist and therefore enable incorporation of some natural feature components. For example, along Elliott Bay in Seattle, the replacement and reinforcement of an existing 1.2-mile long, 100-year old seawall was accompanied by a pull-back of 10–15 feet along most segments from the previous shoreline edge. This pull-back enabled incorporation of several habitat enhancement features (e.g. creation of a shallow water bench along the new seawall designed to facilitate juvenile salmon movement and survival) that in turn helped facilitate permitting and other environmental approvals for the project.

d. Beneficial re-use of dredged sediment

Sediment dredged in the Bay to enable continued navigation has been increasingly disposed of outside the Bay, either into the ocean or at upland locations. This factor, along with naturally reduced sediment loads being brought into the Bay from upstream sources, has resulted in a Bay in which sediment accretion rates may soon fail to keep up with sea level rise rates. Consequently, an increasing number of scientists and regulators agree that placing clean sediments generated during regular dredging episodes along certain shoreline locations, or ‘beneficial reuse,’ could reap multiple benefits, and not only provide protection from future sea level rise and flood events but also enable improved habitat conditions. Examples include Montezuma Wetlands, the South Bay Salt Ponds, and the in-progress Cullinan Ranch wetland site where fill for habitat enhancement purposes becomes an essential part of their function.

3. Permitting Approaches in other Estuary Regions

a. Puget Sound/Washington

Washington has a comprehensive Shoreline Management Program and permit system as a result of its Shoreline Management Act, and a local/state partnership in administering permits. Local governments have the primary responsibility for initiating planning required by the Act as well as administering the regulatory program. The State, through its Department of Ecology, acts primarily in a support and review capacity as well as by enforcing compliance with the Act’s policies and provisions. The Act calls for shoreline master plans to be developed and updated by local governments.

Within the Shoreline Management Act permit system there are provisions for expediting approvals for restoration projects, mainly through the use of an exemption from the State’s substantial development permit process. However, qualifying for such an exemption is difficult and subject to criteria set forth by the State (even though, as noted above, local jurisdictions actually issue approvals). These criteria include a strict definition of “restoration project” (if any part of the project is not considered eligible for an exemption, then the entire project is not eligible). Any project for which the total cost won’t exceed \$5,000, in 2007 dollars, is also exempt from the substantial development permit process, meaning that all other projects exceeding this cost limit are subject to the full permit process unless they are exempt for other reasons. While there are no explicit size or acreage limitations on this process, the dollar cost limitation above would seem to effectively limit eligible projects to those fairly small in magnitude.

Fish habitat enhancement projects on streams seem to be a particular focus of the State in terms of promoting expedited permit review and approval. Projects that remove fish passage barriers, restore an eroded streambank primarily through use of native vegetation, or place woody debris structures specifically intended to benefit fish are eligible for review and approval by the Washington Department of Fish and Wildlife (WDFW) 45 days of having a complete application.

Any project that involves construction in or near state waters requires a Hydraulic Project Approval (HPA). Projects subject to HPA jurisdiction are those that lie below the ordinary high water mark of a waterway, as extended to include associated wetlands. HPAs are issued by WDFW for projects ranging

from docks to culvert replacement to restoration, can be applied for online and converted into a Joint Aquatic Resource Permit Application (JARPA) with one click. Most HPAs are issued within 45 days of receiving a complete application.

In Washington, the Corps typically issues Nationwide Permit (NWP) 27 for its approval of most restoration projects, manages the 401 certification process with respect to avoiding or minimizing adverse water quality effects of projects, and also handles Endangered Species Act concurrence coordination. In Washington, Native American tribes are given co-review status for all Corps permit applications, meaning that effectively working with the pertinent tribe(s) can be a key factor in obtaining timely regulatory approvals for restoration projects.

With respect to schedule, restoration projects that include tidal components generally don't seem to qualify for expedited regulatory review (rather small freshwater stream restoration projects seem get the bulk of expedited permitting). For expedited projects, it generally takes 4 to 6 months to obtain all necessary permits. Non-expedited projects more typically take a year or longer.

b. Florida

Florida implements a state-wide Environmental Resource Permit (ERP) program through its Department of Environmental Protection (DEP) and its five Water Management Districts (WMDs). DEP and the WMDs use the same joint permit application, and at least three of the WMDs enable electronic applications. If the proposed activity involves work in wetlands or other surface waters, a copy of the application is sent to the Corps as well as any other state agencies that have some kind of authority nexus (e.g. Florida Fish and Wildlife Conservation Commission, State Historic Preservation Office, Coastal Zone Management Program agencies).

Specific to restoration projects, there are a number of special permits that have been adopted into rule that provide for expedited or other specialized permit action. For restoration projects to be conducted by one of the state's five WMDs, the DEP has established a General Permit to the Department and Water Management Districts for Environmental Restoration or Enhancement. This fast tracks those projects through reduced (60 day) review and issuance periods to allow the restoration projects to proceed with minimal regulatory process. A summary of that rule is provided below:

- “(1) A general permit is granted to the Department and Districts for the construction, alteration, operation, maintenance, removal and abandonment of projects to implement Department or District environmental restoration or enhancement projects.*
- (2) The environmental restoration or enhancement project must comply with any one of the following procedures:*
 - (a) The project is part of a Surface Water Improvement and Management Plan developed pursuant to Section 373.453, F.S.*
 - (b) The project is approved by the District Governing Board or the Secretary of the Department after conducting at least one public meeting, or*

- (c) *The project is wholly or partially funded by the Department through the Ecosystem Management and Restoration Trust Fund pursuant to Section 403.1651, F.S., or the Water Resource Restoration and Preservation Act pursuant to Section 403.0615, F.S.*
- (3) *When the activity is to be conducted by the Department, the Department shall provide the notice and any processing fee required by Rule 62-330.071, F.A.C., to the appropriate District.*
- (4) *When the activity is to be conducted by a District, the District shall provide the notice and any required fee to the appropriate Department office.”*

There do not seem to be any acreage or total cost limitations in order to qualify for a General Permit.

As a resource to applicants proposing restoration projects, the DEP has developed and houses the Florida Wetland Restoration Information Center (<http://www.dep.state.fl.us/water/wetlands/fwric/>), which provides information for a statewide ecological restoration program for wetlands and their associated uplands using ecosystem management and ecological principles. The Center has been developed to aid local governments and community organizations with their restoration efforts by providing online tools and research materials needed for the implementation and management of restoration projects. A Restoration Guidance Handbook has been developed to provide guidance to local governments and community organizations on the process of wetland restoration, including how to assess the wetland site, determine appropriate restoration measures, as well as state of the science techniques. The Florida Ecological Restoration Inventory is a geographic information systems (GIS) compilation of the locations of current and proposed restoration activities on conservation lands. <http://www.dep.state.fl.us/water/wetlands/feri/index.htm>

Specific to federal approval for restoration and enhancement projects, the Jacksonville District of the Corps has made regular use of (and has recently reissued) NWP 27 for Aquatic Habitat Restoration, Establishment, and Enhancement Activities. The language in this rule basically authorizes restoration activities and does not require compensatory mitigation for activities authorized by this NWP since these activities must result in net increases in aquatic resource functions and services. Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas, the restoration and enhancement of nontidal streams and other non-tidal open waters, and the rehabilitation or enhancement of tidal streams, tidal wetlands, and tidal open waters, are authorized provided those activities result in net increases in aquatic resource functions and services.

Permitting of restoration projects can take from six to 18 months depending on the level of complexity and other factors.

4. Funding Considerations

a. Project mitigation

Restoration emanating as a result of mitigation identified during the environmental review process or as a condition of permit approval remains an important mechanism for funding, on an individual project basis. Most projects funded in this way, however, tend to be smaller in magnitude and more local in benefit. They are limited to the “single purpose” types of projects listed above and do not generally contribute to broader, regional, multi-objective projects.

b. Property taxes (Measure AA)

A major funding source for shoreline restoration and resiliency projects in SF Bay in the coming years was created with the passage of Measure AA in June, 2016. This measure, which enacted an annual additional property tax of \$12 per parcel across the nine-county Bay Area, will generate an estimated \$500 million over the next 20 years. With an estimated \$1.2 billion in needed shoreline restoration/resiliency projects identified for the Bay over the next 50 years by the U.S. Fish and Wildlife Service, the funding generated by Measure AA will go a long way toward accomplishing regional restoration goals. Measure AA funding will be allocated by the newly created San Francisco Bay Restoration Authority.

c. Bond Measures

The passage of the Proposition 1 Water Bond in 2014 now constitutes the most significant funding source available at the State level for funding future shoreline restoration/resiliency projects. The bond measure replaces and expands upon funding that had been available under Proposition 84, a \$5.2 billion water bond that was passed by State voters in 2006 but funds from which have now all been allocated and spent.

Approximately \$1.9 billion in funding from the \$7.5 billion Proposition 1 bond measure was ear-marked for protecting watersheds and for flood management state-wide, categories that would seem to encompass SF Bay shoreline resiliency projects. The California Department of Water Resources, as well as some other state agencies, have been administering funds as appropriated in each annual state budget. The Public Policy Institute of California reports that as of June 2016, \$862 million has been appropriated (out of \$1.495 billion available) for 45 projects addressing water supply and habitat supporting native species².

d. Public/private partnerships

Public/private partnerships have become an increasingly prevalent approach in funding for and implementing restoration projects of all types. Recent Bay Area examples include the Napa River Flood

² Public Policy Institute of California (PPIC). PPIC online blog, 2016. How is California Spending the Water Bond? Available at: www.ppic.org/news-and-events/blog/, June 16, 2016.

Protection Project, the San Francisco Baylands Restoration and Flood Protection Project in the South Bay, and the San Francisco Bay Living Shorelines Project. These partnerships enable more effective leveraging of funds from various public sources, such as Proposition 1 and Measure AA discussed above.

5. Regional Mitigation Strategies

a. Mitigation banks/Habitat Conservation Plans

Mitigation banks have become an increasingly popular and appropriate means to mitigate the impacts of projects in California. These banks provide several advantages over traditional project by project (or ‘permittee-responsible’) mitigation, including more sophisticated planning and implementation success, as well as allowing for larger more connected areas of enhanced or restored habitats that in turn better benefit targeted sensitive species. They also tend to charge a one-time per-credit fee, as opposed to permittee-responsible mitigation that can often have ill-defined or under-budgeted costs and far more significant maintenance and/or contingency costs. Once established, such banks offer the advantage of making obtaining permits more predictable – and timely – for projects that have impacts to sensitive habitats and species. While the Bay Area has lagged behind other portions of California in establishing mitigation banks, it has been gaining some ground in recent years. Guidelines have been developed by the Corps³ and the CDFW⁴ as well as by other resource agencies to govern establishment and management of mitigation banks and conservation areas. The review and approval of mitigation banks is also addressed under a multi-agency federal and state process jointly referred to as the Interagency Review Team (IRT), which meets monthly and is hosted by the Corps San Francisco District.

Habitat Conservation Plans, including Natural Community Conservation Plans, have been another mechanism that can be used to enable a more programmatic and stream-lined permitting approach once they have been set up. Like mitigation banks, however, substantial “up-front” time and expense is typically necessary before they’re available for use.

b. Regional program support

The San Francisco Bay Living Shorelines Project, a multi-habitat multi-objective program led by the California State Coastal Conservancy (SCC), has been an example of a regional program that is testing the role that constructed oyster reefs and eelgrass plantings could play in reducing shoreline erosion and improving flood protection while also providing important habitat enhancement benefits. Public agencies requiring mitigation for impacts resulting from in-Bay projects have been able to participate in the program by funding additional plantings and enhanced monitoring of their performance. Another example is the Wild Oyster Project, led by Earth Island Institute, which aims to build sustainable natural habitats (native oyster reefs) that protect against erosion and rising sea levels.

³ U.S. Army Corps of Engineers. 2008. Compensatory Mitigation for Losses of Aquatic Resources: Final Rule. Published jointly with the Environmental Protection Agency (EPA), in the Federal Register (vol. 73, No. 70). April 10, 2008.

⁴ California Department of Fish and Wildlife. 2014. *Conservation and Mitigation Banking Guidelines*. August 2014.

Other ongoing programs, such as the Regional Monitoring Program for Water Quality led by the San Francisco Estuary Institute, the Long Term Management Strategy (LTMS) led by the Corps, the Adapting to Rising Tides (ART) program led by the BCDC and the National Oceanic and Atmospheric Administration's Office for Coastal Management (NOAA OCM), and the San Francisco Bay Subtidal Habitat Goals Project led by a collaboration among the BCDC, SCC, NOAA, California Ocean Protection Council, and the San Francisco Estuary Partnership, also provide essential data and other resources pertinent to informing shoreline restoration and resiliency project design and implementation.

c. Shoreline resiliency pilot/demonstration projects

Creating special permitting considerations for pilot or demonstration projects is one way to simultaneously advance restoration science, facilitate resiliency work, and enable regulators to become more comfortable with the impact characteristics of such projects, as well as the pertinent mitigation strategies to incorporate, and their likely success. One promising potential pilot project that could benefit from such expedited permitting would be implementation of the Water Infrastructure Improvements for the Nation (WIIN) Act, approved by Congress in December of 2016. Section 1122 of that Act, the Beneficial Use of Dredged Material Program, promises to select 10 locations across the nation for pilot/demonstration projects, with San Francisco Bay a legitimate contender to be selected. Another pilot opportunity could arise out of the Resilient by Design Challenge Program currently underway in the region.

6. Possibilities for Expedited Permitting in San Francisco Bay

Several possibilities for expediting the review and permitting of priority restoration and resiliency projects in the Bay are explored below, and also summarized in Conclusions and Recommendations (Section 7 below).

a. Joint application approaches (i.e. making JARPA really work)

The joint aquatic resource permits application (JARPA) was released with great anticipation some time ago but in the Bay Area has seemed to encounter resistance in some quarters, is outdated in terms of information some agencies now routinely require, and is apparently not used as much as it could (or perhaps should) be. It is designed to stream-line the initial application submittal process by combining all of pertinent resource agencies information needs so they all work off of the same project description and other specifics. However, there are some individual regulators who flatly refuse to use it as well as some applicant representatives who don't use it because they have found it doesn't save them much time. Perhaps it would be timely for the pertinent agencies to re-visit and jointly determine how they could make the JARPA process move more expeditiously specifically for priority ecosystem enhancement projects. Doing so will become even more important as the SWRCB's process to update its "Waters of the State" definition and procedures moves forward.

b. Modified regional permit categories/CEQA exemptions/NEPA exclusions

The Corps currently has two NWP categories that could be employed to enable expedited permitting of certain restoration projects: NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement) and NWP 54 (Living Shorelines). NWP 27, which has no explicit project or impact size (i.e. areal extent or linear foot) limit, has been used with increasing frequency in the Bay Area and Sacramento-San Joaquin River Delta for integrated restoration projects and its continued use appears to be encouraged. NWP 54 is new as of 2017 and does include some general project size limits, such as placement of a living shoreline no more than 30 feet out into the water from the mean high water line and no more than 500 feet in length along the shore, though both restrictions can be waived by the District Engineer if it is determined that doing so would have “no more than minimal adverse environmental effects”. NWP 54 could be modified in the future to remove size restrictions and thereby increase its range and adaptability for use. Finally, and perhaps the most straightforward approach, would be for the Corps to establish a Section 404 Regional General Permit specifically targeting Measure AA projects (and projects meeting Measure AA criteria but being funded through other vehicles) in the Bay Area.

The Bay Conservation and Development Commission (BCDC) currently can issue abbreviated regionwide permits under three categories, however integrated restoration projects do not fit neatly into any of them. A new regionwide permit category specifically addressing priority restoration projects should be developed and issued by the BCDC to enable projects satisfying NWP 27 and/or NWP 54 criteria to also be eligible for abbreviated BCDC permitting.

The Regional Water Quality Control Board should update its existing General Water Quality Certification under Section 401 of the Clean Water Act for the small habitat restoration program (SHRP), which is currently fairly limited in scope, to also embrace priority restoration projects that emerge through the Measure AA allocation process, and to further reduce its size limitations as well as modify some of its seasonal work activity restrictions to make them less limiting. The Regional Board could also consider re-evaluating its current interpretation of no net loss so that compensatory mitigation for restoration projects that clearly demonstrate an overall gain of aquatic habitat functions and services is no longer necessary.

The CEQA Guidelines currently provide a Categorical Exemption (15333) for small habitat restoration projects not exceeding five acres in size. This Categorical Exemption could be updated to also include priority restoration projects that meet certain criteria consistent with those provided in the Measure AA allocation process (though not limiting it to Measure AA projects exclusively). Alternatively, the definition of small could be modified and increased to say, 50 acres, or a size limit dropped altogether. In either case, Section 15333(a) should be revised to make it more consistent with the intent of the Corps NWP 27, which recognizes the concept of aquatic resources functions and values being increased overall and does not consider all type conversions (for example, of a stream or natural wetlands to another aquatic habitat type) an inappropriate habitat conversion that requires mitigation.

The NEPA procedures as set forth by the Corps (33 CFR, Part 325) have some established Categorical Exclusion categories but they are limited and would not accommodate a “typical” integrated restoration

project as envisioned under Measure AA. These procedures could be modified to enable a broader range of integrated restoration, flood management, and resiliency projects to be covered under a Categorical Exemption.

c. Multi-agency application review and processing

Priority integrated restoration projects as determined by the San Francisco Bay Restoration Authority in accordance with Measure AA's allocation and community benefit criteria should be eligible for expedited multi-agency permitting and approval. Similar to the current Dredged Material Management Office (DMMO) process that is designed to streamline dredged sediment suitability determinations across multiple agencies simultaneously, the key regulatory agencies should convene on a regular basis to review and evaluate proposed priority restoration projects through a designed process that concludes with actual permit approval. These multi-agency meetings would be open to the public and any interested parties but would have defined rules for how they could participate. Permit approvals for specific restoration projects could be conditioned on applying appropriate standard mitigation measures pulled from a master list to be developed by the multi-agency group in advance, as detailed in 6e below. In addition, a regional "mitigation fund" administered by BCDC should be established and contributions to it required to substitute for site-specific mitigation measures when, in the judgment of the agencies and as demonstrated by the project proponent, such site-specific measures are either impractical and/or insufficient to fully mitigate any potentially significant environmental impacts of the restoration project. In determining potentially significant impacts warranting mitigation, the whole of the project should be evaluated, with any detriments to a particular habitat type or species balanced against expected habitat and species enhancements.

d. Habitat Conservation Plans

Habitat conservation plans (HCP) build and expand on the regional permit and multi-agency application review approaches discussed above. HCPs provide a comprehensive, fully-funded, regional approach to mitigation. HCPs provide permits for the incidental take of endangered species from state and federal wildlife agencies for permit terms extending up to 50 years. While HCPs typically do not provide authorizations under the Clean Water Act, they are developed to streamline compliance and integrate with other water resource permitting efforts. In return, HCP permittees implement a conservation strategy that provides for the conservation and management of covered species and their habitats through a habitat reserve system created at a landscape scale, built over the permit term, and managed in perpetuity. HCPs are typically funded by a combination of mitigation fees on covered activities and conservation funding from state and federal agencies.

HCP permittees are land use jurisdictions (cities and counties), as well as special districts and private utilities that manage large infrastructure systems. The permittees use HCP permits for their own operations, maintenance, and capital projects. Permittees can extend the take authorization to private activities they approve, typically related to urban development. Covered activities must meet certain conditions to avoid, minimize, and mitigate effects on endangered and threatened species. Permittees are responsible for acquiring, operating, and maintaining the new habitat reserve, though typically

through a joint powers authority created for that purpose. Finally, wildlife agencies provide assurances that no further commitments will be required to address effects on covered species beyond those described in the HCP.

To improve regulatory efficiency in the Bay, HCPs should be increasingly created and utilized, and necessary authorizations of HCPs under the Clean Water Act and related laws should be sought and obtained. One such example of an HCP with these authorizations is the Santa Clara Valley Habitat Agency's Habitat Plan (an HCP), which obtained a Regional General Permit (RGP) from the San Francisco Corps for impacts to waters of the U.S. associated with covered activities. Similar HCPs with supporting authorizations should be developed for additional jurisdictions and regions around the Bay.

e. Best management practices checklist

Effective and expedient permitting is most likely to be successful when certain "best management practices" can be adhered to. Those practices would include, but not be limited to, the following:

1. Meet early with regulators prior to submitting applications, to obtain critical input on issues of concern, necessary studies, and appropriate permitting pathways
2. Incorporate a qualitative assessment of habitat values and functions into the permit application package; mimicking the CRAM and HGM models as much as possible
3. Incorporate as many self-mitigating features into the project as possible while also considering long-term monitoring and maintenance needs
4. Demonstrate a net gain of habitat values and functions (arising out of work done under 2 and 3, above)
5. Ensure that agency representatives participating in inter-agency meetings are the same individuals that will be processing the permits being sought
6. For complex and high-profile projects, conduct stand-alone inter-agency meetings outside of the normal monthly scheduling
7. Maximize the use of programmatic/regional permits and biological opinions or habitat conservation plans where possible, in order to facilitate subsequent project permitting
8. Base formal permit applications on at least 30-50% project design
9. Include focused and consistent monitoring and reporting methods for all projects, including GIS and data sharing requirements coordinated at a regional level, to facilitate the advancement of restoration science and techniques
10. Propose, in the submittal of applications, monitoring approaches and reporting methods that effectively coordinate the expected needs across all relevant permitting agencies, to streamline compliance efforts and save unnecessary costs

11. Create a technical advisory committee (TAC) to provide best available science input into the restoration project planning and design, including adaptive management recommendations
12. Develop conservation measures to be applied to certain project elements (e.g. maximum area of disturbance during construction, in-water work windows, prohibited material types)

These (and other) practices could form the basis for standard operating procedures for expedited permit processing of priority resiliency projects.

Of course, even in the best of circumstances, other factors can arise that are beyond the control of permitting applicants or reviewing regulatory agencies. Maintaining flexibility and commitment to navigate and find solutions in such circumstances is essential.

f. Thresholds and Conditions

Currently, most available mechanisms for expedited regulatory review of restoration and resiliency-related projects in California are accompanied by size thresholds or other substantial restrictions. Applicable size thresholds generally mean that only small projects can qualify. For example, the Habitat Restoration and Enhancement Act (HREA; AB 2193) was approved in 2014 but is effectively limited to projects of no more than 5 acres in size and no more than 500 feet of shoreline. The Act's applicability was also limited to voluntary projects that are not required as mitigation.

The Corps' NWP 27, encompassing a wide range of aquatic habitat restoration and enhancement projects, has no explicit size limitations and has been used for Bay Area/Delta projects of considerable size more recently, which is a promising development. However, these projects are still subject to individual Regional Water Board 401 certification as projects falling under NWP 27 are not covered under the Board's conditioned certification program. The Board limits such certification to those NWPs that are categorically exempt from CEQA and only small habitat restoration projects (five acres or less) are potentially covered under CEQA Categorical Exemption Class 33. The State Water Resources Control Board, under its current no net loss of wetlands policy, also requires mitigation for any net loss of wetlands within a restoration project even if that loss is of lower-quality habitat and due to replacement by another viable and higher-value habitat type (e.g., an ecotone habitat designed to provide higher elevation refuge for an endangered species such as salt marsh harvest mouse).

As noted above in reference to NWP 54, Living Shorelines, project eligibility is limited to those projects involving no more than 500 feet of bank length and located no more than 30 feet out into the water from the mean high water line. While there is some flexibility in applying these thresholds, it would be desirable to significantly increase the bank length and distance limitations explicitly, but with the provision that it can be demonstrated that no more than minimal adverse environmental effects would result.

In 2016, AB 2087 was approved which authorized a pilot program for employing regional conservation investment strategies under the guidance of the CDFW. The legislation was promoted by The Nature Conservancy and other environmental groups and aims to provide for a more regional mitigation

approach, including the use of mitigation credits, to better facilitate the design and approval of major infrastructure projects. There are no project size limits provided for in the legislation nor in the Program Guidelines published by CDFW⁵. As of 2017, two pilot programs under AB 2087 are reportedly in development in the Bay Area related to transportation projects. This may prove a great example of the efficiency and efficacy that can be gained by removing thresholds and utilizing pilot projects for priority restoration projects.

7. Conclusions and Recommendations

The time is ripe for a new and much more efficient and cost-effective approach to regulatory approvals for priority shoreline restoration and resiliency projects in the Bay Area, recognizing the urgency in getting such projects into construction for the benefit of the region. The recent passage of State Proposition 1 and Regional Measure AA will serve as significant financial drivers for funding Bay Area restoration and resiliency projects for the foreseeable future, as well as motivation for regulatory and implementation changes, and thus should lead to more pertinent restoration projects being proposed for evaluation in the Bay in the coming months and years.

The following actions are recommended to enable more timely and effective permit processing for priority restoration and resiliency projects in the Bay Area.

1. Key regulatory agencies (including but not limited to the Corps of Engineers, Bay Conservation and Development Commission, Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service, State Lands Commission, Delta Stewardship Council, and the U.S. Environmental Protection Agency) should convene a multi-agency working group to develop specific strategies and protocols for enabling more expedited permitting for priority restoration and resiliency projects in the Bay Area region, perhaps modeled on the current BCDC-led Adapting to Rising Tides Program.
2. Using the DMMO or IRT processes as models, the key regulatory agencies should formalize a multi-agency entity that would convene on a regular basis and with dedicated staff assigned to review and evaluate proposed priority restoration projects through a designed process that concludes with actual permit approval. Eligible priority integrated restoration projects could be determined by applying Measure AA's allocation and community benefit criteria. Multi-agency meetings would be open to the public and interested parties but would have defined rules for how those parties could participate. Expedited permit approvals for specific restoration projects could be conditioned on applying appropriate standard mitigation measures and best management practices pulled from a master list to be developed by the multi-agency group in advance. The schedule goal for restoration and resiliency projects should be receipt of all

⁵ California Department of Fish and Wildlife. 2017. *Regional Conservation Investment Strategies Program Guidelines*. June 5, 2017.

regulatory approvals and permits within no more than six months of complete application submittal.

3. Programmatic consultations with the resources agencies should be applied to a greater extent as a key component of expedited permitting. The non-profit group Sustainable Conservation is currently leading an effort to obtain a biological opinion under Section 7 of the Federal Endangered Species Act for a wide range of restoration projects within the Central Valley. Something similar should be developed and implemented for the Bay Area.
4. A regional “mitigation fund” administered by an entity such as BCDC or the SF Estuary Partnership should be established and contributions to it required to substitute for site-specific mitigation measures when, in the judgment of the agencies, site-specific measures are either impractical and/or insufficient to fully mitigate any potentially significant environmental impacts of the restoration/resiliency project. In determining potentially significant impacts warranting mitigation, the whole of the project should be evaluated during the permitting process (e.g., using methods such as the California Rapid Assessment Method), with any detriments to a particular habitat type or species balanced against expected habitat and species enhancements.
5. The Corps should consider developing a Regional General Permit (RGP) specifically targeted for priority restoration and resiliency projects in the Bay Area. The Restoration Project RGP could impose conditions that would be no less restrictive than could be permitted under NWP 27 and would make clearer what size and type of projects would fall within it.
6. BCDC should develop an administrative permit specifically targeted for priority restoration and resiliency projects in the Bay Area, provided that any new Bay Fill would be minimized, beneficial reuse of dredged material emphasized where Fill is necessary, and appropriate public access considerations provided for.
7. The Regional Water Quality Control Board should provide programmatic 401 certification for any restoration/resiliency project designated as priority in accordance with criteria set forth by the multi-agency entity described above (#2 above) and/or falling within the Corps’ Restoration Project RGP (#4 above).
8. The JARPA application and the process around it should be reviewed and updated to make it more consistently employed by project sponsors, accepted by regulatory agencies, and successful in actually expediting the issuance of appropriate permits.

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