

## CHAPTER 10 or Memo

### Managed Retreat in Del Mar

The Sea Level Rise Adaptation Plan aims to keep risks related to sea-level-rise within acceptable limits. The planning process identified vulnerabilities in the City of Del Mar, considered strategies to limit risks, and evaluated the feasibility and application of those strategies within the context of Del Mar. Adaptation options fall into three categories. They can **protect** property, for example, through improved sea walls, levees, beach replenishment, or river channel dredging. They can **accommodate** changes due to sea level rise, for example, by raising structures or adding sediment to wetlands to maintain vegetation elevations. The third category of adaptation options involves **managed retreat** and became the focus of much debate, discussion, and deliberation. Adaptation through managed retreat allows wetlands to migrate and expand; relocates public infrastructure, including, for example, sewers, storm drains, fiber optic cables, and railroad equipment; and creates incentives to remove or relocate private property when extreme risks arise.

As STAC deliberated and received communications from the citizens of Del Mar, managed retreat through wetland migration and expansion never raised issues. Del Mar values the San Dieguito River and river-mouth, its associated wetlands, its beaches, and its bluffs as important natural resources. Protecting these resources and ensuring access emerged as a high priority. Likewise, managed retreat through relocation of public infrastructure was broadly accepted. Public buildings at risk include the fire station, the sewer lift station and park facilities. Other vulnerable public infrastructure provides essential services to citizens and access to beaches, bluffs, and lagoon for public benefit and enjoyment. They include sewage management, internet access, storm drainage, transportation and parking, lifeguard stations, and public safety equipment. Ensuring the future of both natural resources and public infrastructure through accommodation or relocation was well accepted throughout the STAC process. The Adaptation Plan includes options at all levels – protect, accommodate, retreat – for Del Mar’s shared vulnerable resources.

In contrast, managed retreat options for private property emerged as contentious and fraught with economic, legal, and multi-faceted financial impacts. This Chapter [memo?] aims to review and summarize two and a half years of structured discussion among STAC members and citizens of Del Mar regarding managed retreat as applied to private property.

## 10.1 State guidance is lacking on retreat in urbanized beachfront

Sea level rise adaptation strategies aim to manage risks to Del Mar’s public and private property, natural resources, infrastructure and assets. Consideration of managed retreat as an adaptation strategy involved a wide range of perspectives, a high level of emotional response, and fundamental disagreement over whether and how to include “managed retreat” in the Adaptation Plan as an adaptation strategy.

The State guidance on managed retreat discusses retreat as an approach to allow shorelines to migrate inland. In Del Mar, this view of managed retreat is insufficient as guidance for planning for amending the LCP. The City of Del Mar includes over two miles of high density, urbanized beachfront, both at beach level and atop ocean bluff. Residents and visitors have unfettered access to pristine, broad beaches. Both Del Mar’s beachgoers and over 600 homes at beach-level would be impacted by managed retreat. Retreat and migration of the shoreline would mean the replacement of an urban environment (currently developed with hundreds of private homes and associated roads and public infrastructure) with wetlands and river.

While the State guidance emphasizes “prioritizing natural infrastructure”, it lacks discussion on retreat in an urbanized context. Expanded State guidance is needed to consider how managed retreat may or may not be suitable in urbanized shorelines or in areas where there is no contiguous open space for the shoreline to migrate inland and connect to. Without balanced and informed guidance on retreat in urbanized, medium-density beachfront areas, local groups must apply common sense and values when considering retreat. In short, existing State guidance prioritizes natural infrastructure without addressing the economic and legal impacts of replacing private property with wetlands and beaches and introducing substantial new risk of flooding to adjacent private properties and public infrastructure. This perspective is being voiced at the local level in Del Mar. The State guidance documents lack adaptation examples applicable to Del Mar’s established beachfront neighborhoods. The documents defer to a jurisdiction’s risk tolerance and lack discussion of how to apply managed retreat to urbanized beachfront via the Local Coastal Program Amendment process.

## 10.2 STAC consideration of managed retreat in Del Mar

In Del Mar’s sea level rise policy planning process, managed retreat for private property was the most controversial issue that the STAC committee evaluated and debated. The committee has been and continues to be nearly equally divided on this issue. Over a two and a half year period, the committee established its position on private property managed retreat. In the first year of deliberations, managed retreat was included in the STAC’s draft Sea Level Rise Adaptation Plan as an option for all regions (wetlands, river, bluffs and beaches). In the second year, STAC, with an unchanged membership,

evaluated the impacts and implications of managed retreat to each area and realized that for Del Mar, managed retreat of private property had profound economic and legal implications, and could, in fact, increase risks rather than limit them. STAC decided to exclude private property managed retreat completely in its final version of the document. Further, STAC requested the City Council add two additional STAC members from the beach level neighborhoods.

### 10.3 Foundations of STAC's position on managed retreat

STAC's position on managed retreat for private property resulted from discussion, debate, and evaluation of the following factors:

1. The voter approved Beach Protection Initiative (BPI) and certified City of Del Mar Local Coastal Program allow seawalls in the beachfront region from 15<sup>th</sup> St. north to the river-mouth.
2. Vocal and committed community engagement on private property managed retreat clarified that it will impose significant costs to Del Mar. For example, the inclusion now of private property managed retreat strategies will increase market uncertainty and potentially reduce land values at a time when much remains unknown regarding how SLR will evolve over the short and long term.
3. Approaches to managing coastal erosion have different distributions of benefits and costs to community at local and regional levels. Hard engineering options (e.g., sea walls) may protect community or private assets but the beach in front of the structure is likely to erode, resulting in potential loss of beach. In such a case, beach amenity and use for locals and visitors are lost in favor of protecting homes and or infrastructure; and significant downstream impacts (e.g., loss of tourism industry) may also occur. On the other hand, managed retreat will protect beach amenity and public use at the expense of property and infrastructure.
4. The committee determined that the City of Del Mar would benefit from a better understanding of the future implications of seawalls in North Beach. Further, the City would benefit from investigating all possible adaptation options that have potential both to maintain the beach and to protect property before starting to consider private property managed retreat strategies.
5. Success of hard and soft engineering options is highly dependent on the nature of the physical environment, the affordability of the mitigation measures and successfully negotiating an outcome that reconciles different contending interests. Some managed retreat actions may well emerge as a component of other adaptations as balanced, well-considered projects are planned.

6. There was general consensus within the committee that managed retreat should be considered only as a last resort after all other adaptation strategies have been fully evaluated and determined not to be viable.

## 10.4 Next steps

The challenge for the Planning Commission and the City Council in developing coastal policy over the next decade will be to design and implement institutional arrangements that prevent and/or resolve legal, financial, engineering and social conflicts in coastal locations threatened by accelerated Sea Level Rise. Many government agencies and key stakeholders argue that there is a need to mitigate the risks of SLR by modifying the coastal urban planning framework. However, strong evidence indicates that risk mitigation policies that are unpopular and socially divisive in the shorter term will not be accepted over the long term. In general, policies designed to manage long term risks tend to be controversial. Therefore, community involvement will continue to be central to the success of strategies for gaining public acceptance of schemes designed to reduce long-term risks.

Finally, the public should be engaged in deciding how to manage the long-term risks of SLR and in determining the actions to be undertaken under various SLR scenarios. While public engagement is time consuming and expensive, it is important for policy makers to understand and respond to community concerns, match policy to community needs wherever possible, and give the community a greater sense of ownership over the design and implementation of new policy. It is critically important that the Planning Commission and the City Council understand the perspective and decision-making criteria that property owners employ to make sense of proposed SLR risk mitigation policies. For a managed retreat policy not to further heighten social, economic, legal and political conflicts, both the Planning Commission and the City Council must define a process to understand the concerns of various constituents and engage in dialogue with the community.

## 10.5 Addendum: Range of positions on managed retreat

### **STAC MEMBER 1 (KB): Address managed retreat now.**

We need to face the issue of Sea Level Rise head on, now, proactively. By removing managed retreat as an adaptation option from the Adaptation Study, we have removed what might be our only option once seas have risen above a certain level. When this will occur, no one knows. Originally we tied the managed retreat option to the amount of sea level rise, frequency of coastal flooding, and the loss of a walkable beach. By coupling retreat to these triggers, we were not saying when retreat might be necessary. We were simply reinforcing two of the STAC's guiding principles: maintaining a walkable

beach and reducing flood risk. Without retreat as an option, we have abandoned these guiding principle. Under the high SLR scenario, beaches in Del Mar will be lost if the back of the beach is fixed by sea walls. Low-lying areas in North Beach will be continually flooded by storm and high-wave events. No amount of sand replenishment, sand retention devices, or even the complete restoration of natural sand supply through returning rivers to their undammed state will be able to prevent beach loss and flooding if the beaches are not allowed to move inland in face of rising tides. How to compensate private property owners and how to manage the process of retreat are important questions that will take years, possibly decades to work out. We need to start that conversation now. By removing retreat as an option, we are deciding against starting this difficult conversation. By removing retreat as an option, we will be forced to react quickly, without as much time to examine the financial, legal, and social issues associated with managed retreat. Decisions are better made with time and information; by removing retreat as an option, we may be forced to make decisions quickly, without all of the needed information, and our options will be more limited.

The entire STAC voted overwhelmingly in support of these guiding principles. These guiding principles were not made in isolation - they are supported by the California Coastal Act and the Del Mar Community Plan. The public has an inherent right of access to and along all beaches and shorelines. We have not acted in the beach-going public's or the community of Del Mar's best interests by removing retreat as an adaptation option. The beaches are a public trust, and belong to every Californian. Without retreat as an option, we are abandoning our beaches in interest of the protection of private property, contrary to the laws and guidelines of Del Mar and the state of California.

**STAC MEMBER 2: (MH) Classic Free Rider Problem of Sea level Rise.**

Sea-level rise is by definition a phenomenon that affects every California coastal community as a result of CO<sub>2</sub> emissions. When it comes to reducing carbon emissions there is a classic free rider problem. The free rider problem is a market failure that occurs when people take advantage of being able to use a common resource, or collective good, without paying for it, as is the case when citizens of a country utilize public goods without paying their fair share in taxes. Coastal communities would benefit from lower emissions by relying on the public to make sacrifices and reduce their pollution levels. Sea-level rise is to a large extent caused by externalities. When you drive an SUV, the contribution to climate change and sea-level rise is an external cost which you don't experience personally. Free markets are notoriously bad at including external costs in prices. The consequence is that there is over-consumption of goods which pollute and cause sea level rise. In theory, economics has a solution to the problem of externalities. If you can work out the external cost of driving an SUV, you can place a suitable tax to make people pay the social cost and reduce demand to the

socially efficient level. The difficulty is working out and then agreeing on a suitable external cost. If the real cost of climate change and sea level rise is as high as current science indicates, it would suggest carbon emitting vehicles are seriously undertaxed and the social cost of carbon emissions is much higher than current legislation suggests. The difficulty then also becomes convincing the general public that due to the external costs of pollution there is a need to establish a carbon tax to acquire private property via managed retreat.

**STAC MEMBER 2 (MH): Consideration of private property managed retreat is premature and requires additional local and state guidance.**

As a result of the free rider problem, it is clear that a private property managed retreat policy will impose the most significant and unfair costs on affected coastal communities. Another problem with sea-level rise is that there is tremendous uncertainty about the future costs of sea-level rise. The imposition of private property managed retreat strategies for pre-existing communities will certainly increase market uncertainty and reduce land values. Local communities should adopt voter-approved initiatives similar to New Zealand, where the Queensland Sustainable Planning Act requires local councils to compensate owners when a planning decision reduces property values (section 704). Thus, local communities need to resist private property managed retreat strategies until a dedicated statewide funding source is created. It is recommended that a dedicated State of California funding source, such as a carbon tax, for fair market land acquisition be established before private property managed retreat is required in any community plan. A voter proposition on the California ballot would be the best way for California to determine if the public values their beaches enough to impose a carbon tax. If the California people do value their beaches, then they should be more than willing to impose a state-wide carbon tax to implement private property managed retreat. In summary, private property managed retreat is a complicated issue that the voters of California should decide.

**STAC MEMBER 3 (RC): Public beach access depends on protection and accommodation**

Sea Level Rise is an environmental change that all beach goers and Del Mar residents will need to adapt to any changes that occur. We do not know exactly how much sea level will rise and when it will occur or how soon. With this Adaptation Plan, Del Mar will now gather monthly and yearly data in order to identify any changes. As changes occur, it will be important that adaptation options are thoroughly reviewed including any new options being used nationally and internationally. One example to monitor is the research of the effectiveness of different shapes of seawalls in Japan.

STAC has acted in the interest of both the beach-going public and the Del Mar residents. A walkable beach is a high priority with our residents and visitors! STAC with

Del Mar resident input reviewed the option of managed retreat of private property and together most believe it is not appropriate at this time. There are so many options to be reviewed and utilized before any discussion ever needs to take place regarding managed retreat of private property. There are over 600 homes in the Del Mar beach community with the homes along the beach behind sea walls at about 13 feet above sea level. East of the beach, the homes and properties decrease to eventually 3 feet above sea level before reaching the railroad tracks. In addition, within the beach community, over 800 (waiting for confirmation) public parking spaces allow public access to the beach. If the homes are gone, the parking is gone, beach access is gone and now the visitors and residents are gone! Where is the walkable beach?

Before any discussion of managed retreat of private property begins, an engineering evaluation of the beach community and managed retreat needs to be completed. I direct you to the technical paper titled “The Practicality of Managed Retreat” written by expert Walter Crampton.

Therefore, managed retreat of private property is not an appropriate adaptation option to be included in this Del Mar plan.

**STAC MEMBER 4 (TG): Managed retreat applies differently across Del Mar’s diverse regions**

Protecting our natural resources in Del Mar – our beaches, our wetlands, our bluffs – is a top priority and drove much of STAC’s deliberation. Del Mar’s natural resources include a wide sandy beach ranging from urbanized oceanfront to high bluffs fronted by broad sand and reefs that make waves ideal for surfing. Del Mar residents and visitors enjoy running and walking on the beach, spending hours on a sunny day near the surf with towels, picnics, and happy children at play. Surfers from far and wide join the local surf crowds at 8<sup>th</sup> St, 11<sup>th</sup> St, and 15<sup>th</sup> St and on down to the river-mouth. Beach enjoyment happens year-round, in all months. On nearly every day of the year, runners and walkers can continue for nearly 3 miles from lagoon to lagoon – albeit at low tide only when winter storms have washed the beach sand into the offshore reefs.

This beach resource, complemented by Del Mar’s canyon paths and wetland overlooks, comprises Del Mar’s most important asset. It draws newcomers and visitors and adds great value to homes and businesses. It must be protected, nourished, and cared for with highest priority as sea level rise planning moves forward.

Del Mar’s STAC studied the many adaptation options identified throughout California as the state and other localities evaluated vulnerabilities and how to minimize them. STAC has drafted this Adaptation Plan to minimize risks in all areas of Del Mar. Protection and accommodation options will be the most important while sea level rise remains steady and slow. STAC regarded managed retreat as wise for some areas, including the

lagoon wetlands and the bluff tops. However, STAC recognized, with much community input, that managed retreat in the oceanfront area of North Beach has complexities and implications that go far beyond the guidance received from the State. Specifically, STAC came to understand that managed retreat in the beach-level communities means losing beach access, putting sea-level (or below) homes to the east at greater risk, and loss of property, infrastructure, and resources.

In short, STAC could see clearly how managed retreat options can be applied in wetlands and bluffs, but could not come to census or develop a clear view of how managed retreat options could apply in the urbanized oceanfront areas without introducing new vulnerabilities, loss, and risk. Many other options to protect and accommodate have yet to be explored in detail. Many are promising and have potential to maintain Del Mar's natural resources in much their current state for many decades to come. Thus, STAC decided – in a vote that involved all members, after much community input – it is premature to include managed retreat for private property in the current STAC draft Adaptation Plan.

**[INSERT OTHER STAC MEMBER POSITIONS HERE]**

## 10.6 Addendum: STAC Discussion on managed retreat 12/7/2017

**[Keep the following discussion in this document? Or make sure points are included above in 10.5?]**

**Gabe:** Wants to understand the rationale for sub-c changes, particularly to eliminate MR. The identified overall goal of maintaining a walkable beach is still good. If the beach persists that will protect the DM character going forward. Some of the changes to the AP take away from that. Don't understand why removal of retreat is proposed. We are building a tool box— Managed Retreat (MR) may be an appropriate tool in 30-40 years even if not now; it does disservice to the long range focus of the planning effort to eliminate it from the AP. Focusing only on sand replenishment is not enough. Sand is not an infinite resource; not appropriate as the only strategy. MR should not be done home by home—may take 10-20 years to set up implementation mechanisms; if the AP eliminates MR now, we are pushing this issue way down the line. Doing that raises bigger econ. issues. The AP is missing the needed info to justify eliminating MR—STAC needs the sed. mgmt. plan, to understand and analyze not just local options for DM but also how to be part of regional sand solutions—all this is required to do effective sand replenishment—not just DM grabbing sand it wants.

**Terry:** Sub-committee charged with taking input, beach community concerned with retreat. Retreat remains for public property. Felt it was difficult for committee to impose language on private owners that could have negative financial impacts by including MR in a public report.

**Amanda:** AP will be updated regularly. Concern for harm from addressing MR in the AP, and for its removal, was based on current conditions—option is still there if conditions change. Goals are in the plan to preserve the beach—don't have solutions to allow it to persist overtime, absent a sed. mgmt. plan that says we can do that.

**Robin:** DM is unique—homes on beach, if the AP tells them to retreat, it diminishes value—waiting for an AP amendment down the road when MR is needed is better than including MR language now.

**Kristen:** STAC goal was to assess impacts based on science. Science is reality. The rev'd draft AP is suppressing info if MR is not included out of fear of private finance impacts when the science is otherwise. Financial impacts to inland properties from seawalls is documented in studies. If beaches go, all property values impacted, not just the front row. The science is clear on MR—fixing back of beach is diametrically opposed to preserving a walkable beach.

**Kim:** Opposed to MR—has already hurt the market. Lots can happen in 10-15 years. Might have better options in the future—unconscionable to put MR in doc.

**Nancy:** How does MR contribute to a walkable beach? Won't we end up with inland lagoon?

**Gabe:** If the back of beach is fixed, the beach can't retreat naturally, the beach will gradually be lost. If STAC waits too long to deal with this issue we will be reacting, not planning ahead.

**John:** Will beach meander if walls removed?

**Gabe:** Gabe is not advocating for pulling the seawalls out—is a complex situation, but many homes are built in hazard area. Should be a community wide solution. There are options. For example, a plan to pull seawalls back 15 feet in 2075, might allow the beach to persist—there are options.

**Nancy:** Take out walls, higher homes in front row. Not a beach any more.

**Gabe:** Might be options like a dune solution. For example, may need to plan to retreat to accommodate a dune field when certain thresholds are met.

**Bruce:** Take some of the heat off Gabe—the ocean is changing in ways it hasn't before. Risk posed is substantial. Bruce forwarded a recent paper on natural options for addressing SLR. It addresses alternatives to seawalls, such as wetlands restoration, dunes, etc. These options are very time consuming, expensive, to do right. Taking out MR words, is upsetting, but will mean we attack the problem in a more rushed and expensive fashion—nobody wants MR until we absolutely have to do it. We don't know how much SLR is coming and when—we only know it's happening and accelerating. Understand impacts to values, etc. but hard armoring accelerates beach loss. Replenishment is a half measure—we need to address all measures that will address the problems—we hired the best science consultants, yet we are taking one of their main

recommendations off the table. Bruce can't put his name on a report that takes MR off the table as to private but not public properties—intellectually doesn't make sense.

**Robin:** DM has done nothing. Sand replenishment done eons ago. Now hearing we are going to MR.

**Bruce**—Not saying we are going to MR, it's a last resort, but don't take it off the table.

**Mark:** Had a consultant do the report, wasn't really oriented to DM; STAC then got lots of input, and opened our eyes. We struggled with input from the public. We followed the guidelines, but made some of our own. We need to do a survey of DM—what do the locals want to happen? Asking lay committee to make decisions without expertise—without econ and legal studies is not the right way. We need some kind of sand replenishment and retention—can't uncouple the two. One of first things DM can do is figure out sand retention. Some say the AP revisions are a step backward, but we took input of community and reflected it. Elected officials should make the decision, they are accountable to voters. City Council should make the decisions.

**Kim:** Against MR from what he has seen in last 50 years. Most sand lost in 70's, 80's 90's. Haven't seen as much loss in last 10-20 years. Not a critical need now. Need for MR is further off. SLR is happening more slowly. Scientists disagree—won't sign a doc. that includes MR.

**John:** If SLR goes up a couple feet, everyone will leave. But putting MR in the doc. now affects lending practice. Lenders will loan in flood zone, but not in an MR zone. This is why the words of the AP have current impact. John saw this with hurricane Sandy. MR makes sense from science and practical perspective, etc., but causes immediate finance problem. That's why John wants MR out—if we can work around the issue somehow, more power to us.

**Nancy:** Fanny and Freddie identify properties that are not eligible for loans, including properties that can't be built or rebuilt (reads excerpts of guidelines)

**Kristen:** How does this play into existing situation?

**Nancy:** Can't answer—just reporting the current regs from F &F.

**Mark:** This is a legal issue that needs to be reviewed.

**Terry:** We need a lengthy statement about MR in the report, reflecting both Gabe's and other perspectives. Explaining how and why we struggled with this difficult issue.

**Mark:** MR is last resort, we should pursue all other options. All agree.

**MOTION:** Write a discussion about MR as discussed at STAC committee. Include the struggles and perspectives on MR. Make explicit why MR left out of the AP.

**Yes: Kim, Bruce, Mark, Robin, Terry, Kristen**

**2 abstentions: Nancy and Gabe**  
**Motion passes.**