

# **Chemical Storage**

*versus*

# **Beneficial Use**

**Gashouse Cove - San Francisco, California**

**April 2026**

# **Chemical Storage vs Beneficial Use**

## **Gashouse Cove - San Francisco, California**

**April 2026**

**A proposal submitted to BCDC regarding the MIRP**

### Table of Contents

Introduction .....	3
Background.....	4
Contested Block.....	7
Greater Public Access .....	10
Beneficial Use Condition .....	16
Conclusion and Recommendation.....	17
End Notes .....	18

## Introduction

BCDC will soon authorize the permanent storage of hazardous chemicals along the San Francisco Bay margin. The chemicals are located beneath sediment along the Marina Green shoreline, under Fort Mason's Pier 1, throughout Gashouse Cove, and in adjacent upland soils. Storing the chemicals is implicit in an application for permit now under BCDC review. Denial of the permit is unlikely: the contamination is widespread and removal costs are very high. The more probable outcome is approval, possibly with conditions. When it approves the permit, BCDC will determine precisely where and under what constraints hazardous chemicals may remain in place in Gashouse Cove. The decision may also set a precedent for similar cases elsewhere in the Bay region.

The San Francisco Bay Plan mentions a goal for areas with chemical storage: to “*ensure that the project will not cause harm to the public, to Bay resources, or to the beneficial uses of the Bay.*”<sup>1</sup> The important concepts for this report are Bay resources and beneficial use. The application contains an area where the proposed chemical storage does not substantially affect Bay resources or interfere with beneficial use in a practical sense. It contains another area where the proposed storage diminishes a Bay resource, reduces circulation and water quality, makes the current beneficial use impossible, and restricts the range of future uses. This report recommends that BCDC add a condition for beneficial use to avoid these impacts.

A word about the other concern mentioned in the Bay Plan: *harm to the public*. This report does not evaluate human health or environmental risk. Those issues fall under the jurisdiction of the Regional Water Quality Control Board, which has determined that the chemicals can be safely contained with appropriate protective layers and monitoring.

This report examines the reasons for chemical storage, the tradeoff between it and beneficial use, and whether the application aligns with BCDC's dual mandate to conserve and to develop the Bay. As currently structured, the application does not meet that mandate. However, it can be made consistent if BCDC adopts the condition proposed in this report.

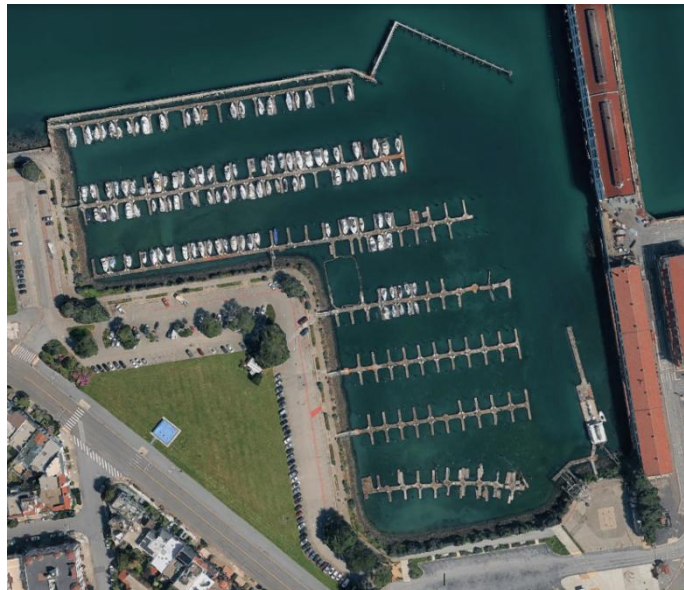
## Gashouse Cove

### Background

Gashouse Cove was developed as a small craft harbor in the 1960s:

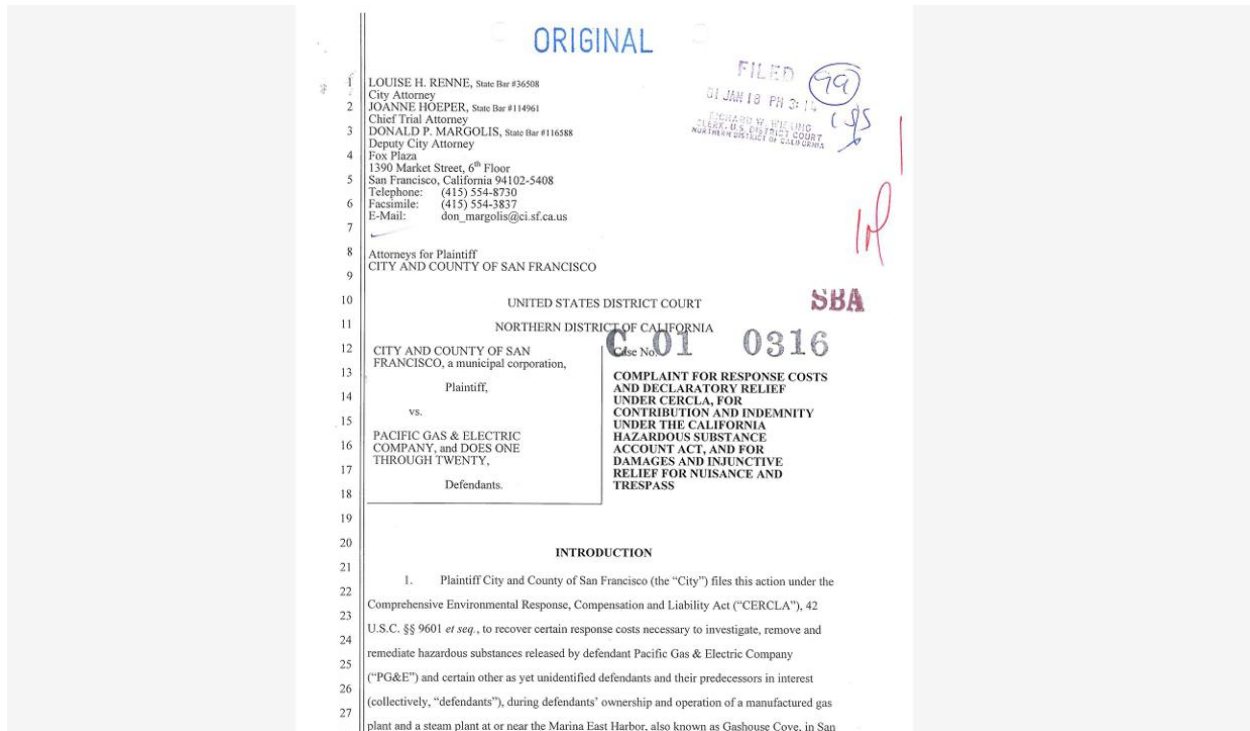


1994, contamination from former manufactured gas plants was discovered. PG&E and the San Francisco Recreation and Parks Department (RPD) then entered a prolonged dispute over responsibility for dredging costs. During this period, the harbor gradually silted in and became largely unusable by the 2020s:



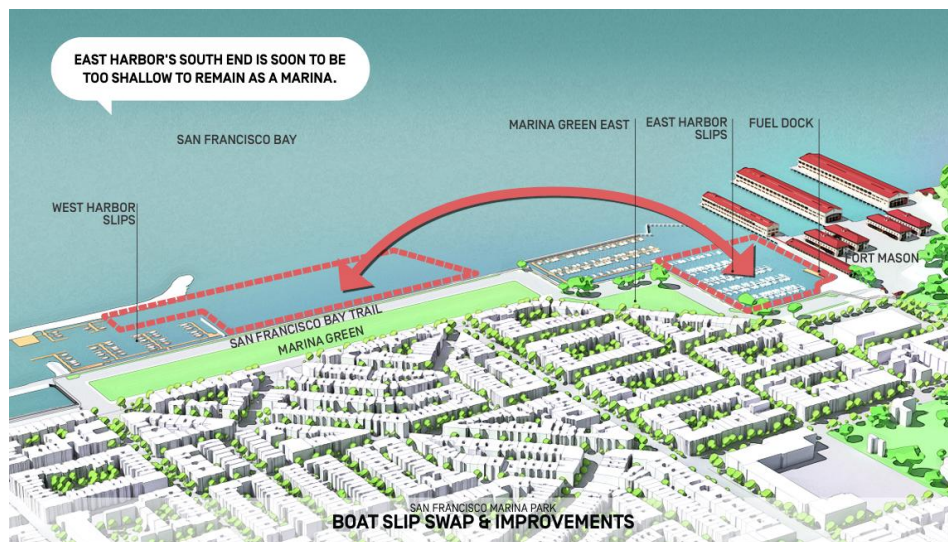
## Gashouse Cove

RPD filed suit against PG&E under CERCLA (the federal Superfund law) in 2001: <sup>2</sup>



Following years of negotiation, the parties reached a mediated cost-sharing framework in 2004. They then continued technical and financial discussions for 17 years. In 2021, they executed a Settlement Agreement and Full and Final Release (Agreement). <sup>3</sup>

A key element of the Agreement was relocating boat slips to a new harbor in front of the Marina Green. It was called a boat swap:



The idea generated strong public opposition and was eliminated in 2024 following unanimous action by the San Francisco Board of Supervisors.

## Gashouse Cove

The remaining elements of the Agreement form the Marina Improvement and Remediation Project (Project), which is the subject of the current BCDC permit application. After 27 years of dispute, PG&E and RPD are now co-applicants and project partners.

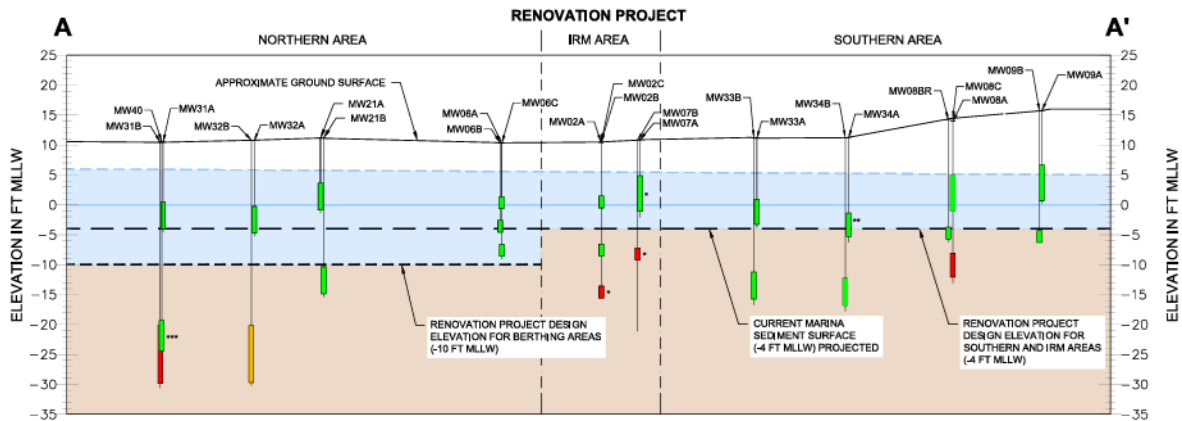
# Gashouse Cove

## Contested Block

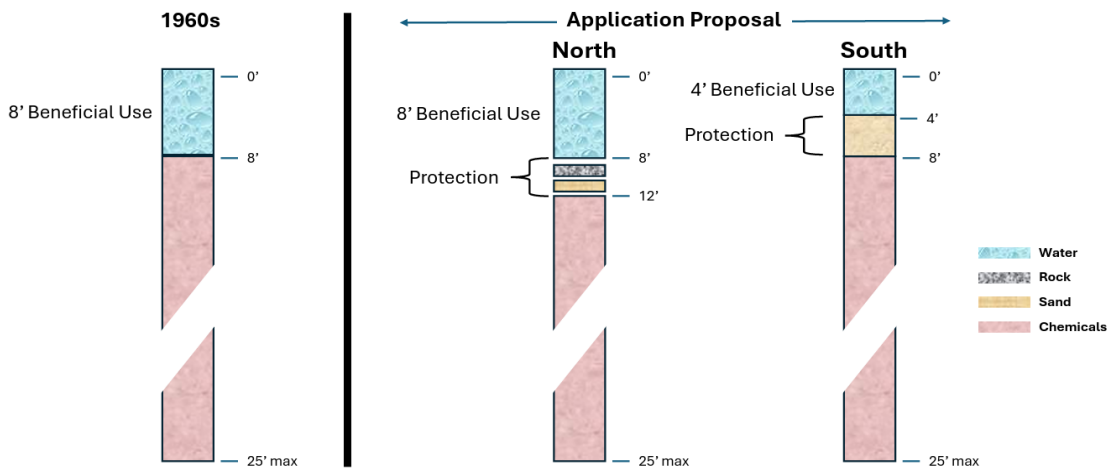
When Gashouse Cove was developed as a harbor in the 1960s, the entirety of the cove was dredged to 8' MLLW. For more than 50 years, it served as a marina for smaller recreational craft including many sailboats as seen in the first photograph of this report.

The Project divides Gashouse Cove into two parts. The northern part is to be restored for marina use similar to its previous use. The southern part is to be used for chemical storage with concepts currently being developed for limited recreational use above:

Chemical storage requires an isolation layer to protect chemicals from users and to protect users from chemicals. In the southern part, the Project proposes to use sediment above 8' MLLW as an isolation and protection layer for chemicals stored below 8' MLLW, thereby avoiding dredging. This is driven by cost: dredging this area would increase the cost of remediation. It results in specifying different depths in Gashouse Cove north and south:

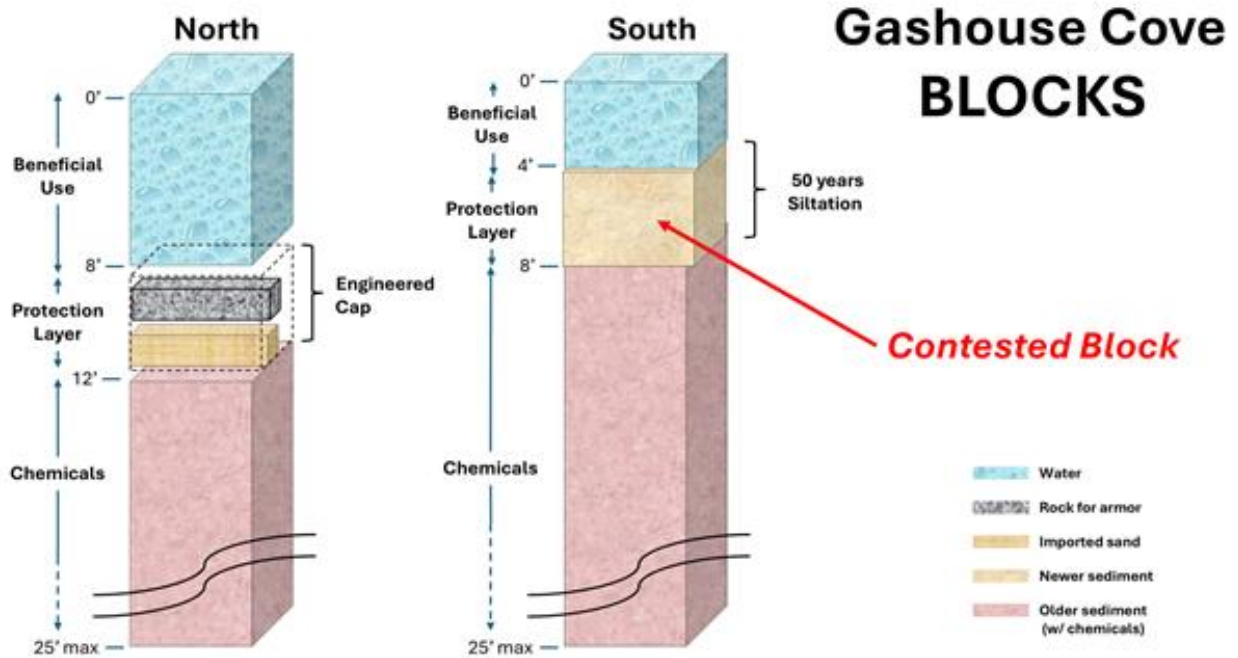


## Gashouse Cove



## Gashouse Cove

For convenience, the northern and southern parts are referred to as North and South (North, South). The partitioning is best understood as three-dimensional blocks, all of which are Bay resources:



The Project's plan for one of the blocks, the length and width of South from 4' MLLW to 8' MLLW, is contested in this report (Contested Block). The Contested Block contained only water when the harbor was built and therefore was of beneficial use. It stopped being beneficial during the Applicants' dispute when it silted up from the lack of maintenance dredging. This effect can be seen by comparing the first two photographs in this report.

The Contested Block, when filled with sand, reduces water volume, limits circulation, and constrains both current and future beneficial uses. These effects are inconsistent with multiple Bay Plan policies.<sup>4</sup>

**Water Surface Area and Volume, Policy 1:** *The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action. Filling and diking that reduce surface area and water volume should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative.*

## Gashouse Cove

The Contested Block filled with sand reduces the total volume of water. It does not provide a public benefit, rather it provides a cost benefit to a private company. There is a reasonable alternative: dredge South to remove the sand from the Contested Block and return it to its permitted, beneficial state. The alternative is not theoretical; it is the same approach already being applied in North.

**Water Quality, Policy 1:** *Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses.*

As mentioned, the Contested Block filled with sand is a reduction in water volume. Removing the sand will improve circulation and water quality. Not removing the sand keeps the area a confined, shallow backwater with low flow that leads to stagnant water and accumulation of debris.

**Fills in Accord with Bay Plan:** *A proposed project should be approved if the filling is the minimum necessary to achieve its purpose, and if it meets one of the following three conditions:*

- *The filling is in accord with the Bay Plan policies as to the Bay-related purposes for which filling may be needed (Le., ports, water-related industry, and water-related recreation) and is shown on the Bay Plan maps as likely to be needed; or*
- *The filling is in accord with Bay Plan policies as to purposes for which some fill may be needed if there is no other alternative (Le., airports, roads, and utility routes); or*
- *The filling is in accord with the Bay Plan policies as to minor fills for improving shoreline appearance or public access.*

The sand in the Contested Block is fill – arguably *unauthorized* fill given that Gashouse Cove has been permitted to be an 8' MLLW harbor for the last 50 years. The Project's purpose for the fill is to protect chemical storage. That purpose does not meet any of the three named conditions. Note that 'public access' cannot be cited because the fill is not *necessary* for public access.

Water volume and circulation can be good or bad depending on several factors. Shallow water with limited circulation can be of benefit to the environment in some areas, especially when coupled with freshwater mixing, such as in an estuary. South is not that kind of location. It is relatively small, confined by man-made borders, and located next to a busy part of the City's shoreline. The only freshwater flowing into it comes from a sewer

outfall. 8' MLLW will allow more circulation and keep the water in South cleaner and healthier than 4' MLLW.

## Greater Public Access

The phrase “*greater public access*” is used to justify a change-of-use in South.[3] The idea first came to light in 2018 when RPD and PG&E were still in dispute. Negotiations were occurring between the head of RPD at the time and a seasoned PG&E director whose history goes back to Hinkley. The PG&E director appeared before the RPD Commission and said:

***“... we have a lot of common interests. Park and rec need to dredge the site to keep it operating as a marina. We have an interest in that there's historical [arti]facts from gas plants... What we came up with ... a gradual modification of the use of the marina to a more open public access ... rather than access for a small number of boaters ... and it could save tens of millions of dollars for both the city and for pg&e.”<sup>5</sup>***

It was a sales pitch but it's important and worth unpacking. Rhetorically, the speech linked a universal good to an idea the director wanted to sell. The universal good was greater public access. The universal good could be achieved if the Commission was open to a change of use. He said the downside would be sacrificing the exclusive access of small number of boaters. His speech presented a choice that was a no-brainer. For the Commissioners, as for most people, public versus private is the same as good versus evil. The key part of the speech, however, is the focus on common interests. PG&E and RPD have a common interest: saving money. The appeal is for RPD and PG&E to stop being adversaries and instead work on saving money for both organizations which, at the same time, would result in the universal good of greater public access.

An article<sup>6</sup> appeared in the San Francisco Chronicle about the negotiation a few days after the appearance of the director before the RPD Commission. According to the article, PG&E proposed something more than a gradual modification of use. RPD should get rid of the harbor altogether. It should turn Gashouse Cove into a waterside park with a shoreline, a small beach, a fishing pier, and tiny islands for roosting birds. The PG&E spokesperson is quoted as saying:

***“Our proposal... will cost less than a dredge and marina replacement, potentially saving the city tens of millions of dollars”***

The emphasis is again on saving money - and these events occurred during a lawsuit over costs. It's obvious PG&E would save money if the chemicals did not have to be removed.

## Gashouse Cove

How would RPD save money? PG&E would provide funds for RPD to use for its expenses in exchange for RPD allowing PG&E to store chemicals on property that RPD controlled. It made financial sense as long as the amount was less than the cost of removing the chemicals. On the other side of the table, RPD was facing a large capital expense for a long overdue renovation of the harbor and adjacent parklands.

The pitch was successful. The short speech before the RPD Commission in 2018 started a long approval process. The then head of RPD and the PG&E director went on to sign a term sheet in 2019.<sup>7</sup> The term sheet contained all the elements of the Agreement. The then head of RPD and a higher-level VP at PG&E signed the Agreement in 2021.<sup>8</sup> All of this beyond the public's view. Then, in 2023, RPD rolled the Project, the public took issue with the new boat harbor, the controversy was settled by the Supervisors in 2024.<sup>9</sup> The approval process hesitated briefly but restarted and reached BCDC in 2026.

The essence of the deal:

The financial terms overwhelmingly favor RPD. The Agreement includes a project costing up to \$190M. PG&E pays all costs up to the \$190M. RPD's only obligation is to repay a \$30M PG&E zero-interest loan in \$1M increments over 30 years using harbor profits.<sup>10</sup> The Net Present Value of the zero-interest loan is \$10M assuming all payments are made and made on time.<sup>11</sup> That means the financial split between PG&E and RPD is 95% and 5%, respectively. Big picture, RPD's portion of the Project's cost is negligible. The zero-interest loan obscures the fact that, essentially, PG&E pays all and RPD pays almost nothing.

Conversely, the split between remediation and harbor improvements is close to 50/50. In 2024, the budget was \$188M and allocated as follows:<sup>12</sup>

	<b>Improvements</b>	<b>Remediation</b>	<b>Total</b>
<b>Direct costs</b>	\$68M	\$89M	\$157M
<b>Overhead</b>	\$13M	\$18M	\$31M
<b>subtotal</b>	\$81M	\$107M	\$188M
<b>share</b>	43%	57%	100%

PG&E is paying \$107M to remove its chemicals and providing an additional \$81M for RPD to use for harbor improvements. Under normal circumstances, RPD would use its own capital to make harbor improvements. Why is PG&E providing funds for RPD to use instead of RPD using its own capital? It's because RPD is agreeing to store a greater amount of PG&E's chemicals than would otherwise be necessary. It's an interesting transaction that can be viewed in more ways than one.

## Gashouse Cove

Ignored throughout the process was the fact that the negotiators had decided to store a larger volume of chemicals than expected.<sup>13</sup> Chemical storage is central to the Project but mostly unseen and easily overlooked; the only visible indication is the change-of-use in South. It is believed that South is not important to RPD except for chemical storage, but it's too prominent to simply put up a fence and sign saying danger, toxic chemicals, keep away. RPD had to find another use for South to direct attention away from its primary use as chemical storage.

At 4' MLLW, South is too shallow for boating. With the Laguna Street sewer outfall spilling into it, it's too polluted for swimming. The Water Board won't allow motorized vessels or any activity that might imperil the protection layer below. Kayaks and SUPs were the only things that seemed plausible. Casting the idea as the public versus boaters and using the catchphrase "*greater public access*" was simply a smart way to market the idea.

Consider the Project's plan for South

RPD's plan is still conceptual but there are suggestions. It was called a "shallow water paddleboard recreation area" when the Project was introduced. Stand-up paddleboards (SUPs) were reportedly favored by the head of RPD at that time. When asked about its use today, RPD speaks of kayaks, kayak polo, small sailboats, and paddleboards. These activities imply water contact. It's understood that swimming will not be allowed and access will be only through a manned community dock. Two illustrations on the following page show some of RPD's concepts.

# Gashouse Cove



Two visuals from April 2026 suggest RPD's vision.



For convenience in this report, RPD's conceptual plan for South is named after kayaks and SUPs (Kayak/SUP Area).

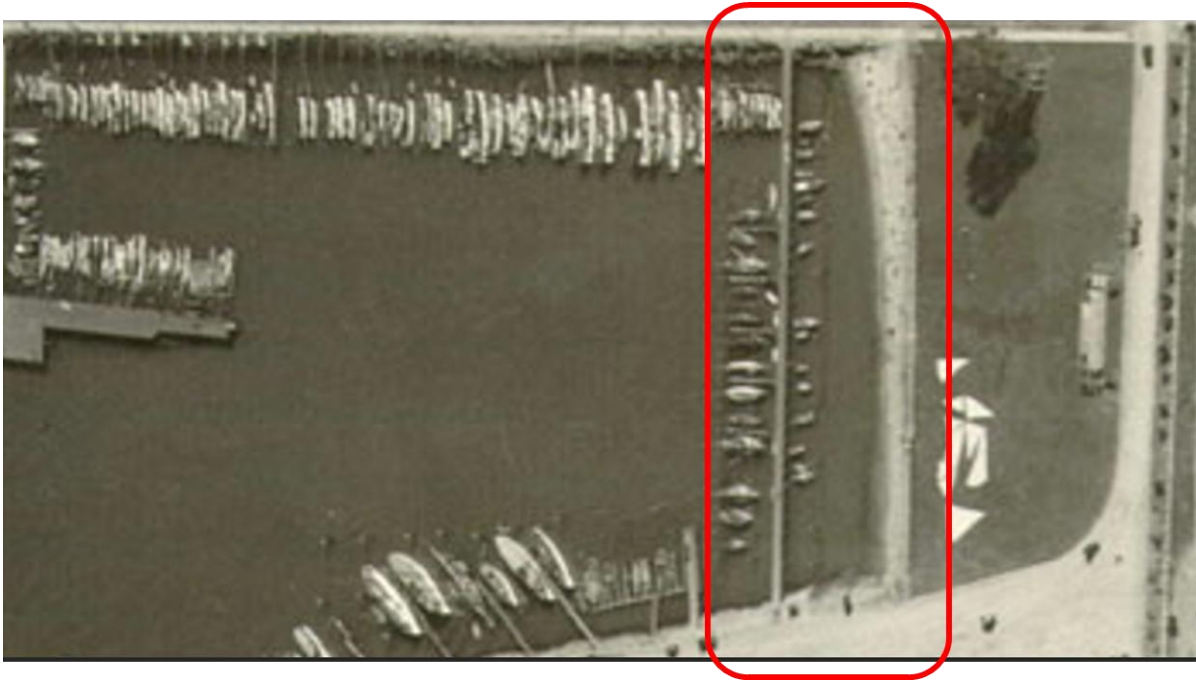
The idea of a Kayak/SUP Area has intuitive appeal. A shift from a marina serving a relatively small number of boaters to a more open recreational space suggests broader public benefit. While the idea seems appealing, it may not be practical in the long run. A not-unreasonable scenario is a flurry of excitement followed by a period of neglect and decay. The following is fiction, but plausible:

**There will be ribbon cutting, speeches, and a photo op for politicians. There will be a period when people from all over the Bay area give it a try because the public has an appetite for whatever's new. But there won't be many repeat customers. Time will prove the limitations outweigh the attraction. San Francisco is not a tropical paradise. Its weather is rarely good for water contact activities. The space is small and confined. The water is often polluted from a sewer outfall pipe in the corner. It never passes the EPA's REC-1 standard for human-to-water contact. It's shut down after rainstorms as a precaution. You are not allowed to touch the shoreline which is made of riprap and unattractive. The concrete wall to Fort Mason is similarly off limits, industrial looking, and equally unattractive. No swimming (Who would want to?). You are allowed to toss a ball, float, row, paddle, and splash but there is no destination – no place to go except back to the community dock where ingress/egress is awkward for kayaks. You can exit to the Bay, but there's an existing kayak launch nearby that's seldom used. If you fall in, you must be careful not to touch the bottom lest you disturb the protection layer. People who play kayak polo will be repeat users, but the numbers are not large. Also, it's not clear that the overall appeal, including traffic and parking in a high use tourist area, compares favorably to other locations kayakers use today. In any case, fewer and fewer people return to the Kayak/SUP Area after the initial hoopla. There is no income but there are costs. RPD will reduce the time it's open because fewer people are using it, creating a downward spiral. Security will have to be maintained because it will always be an attractive nuisance. There will be no incentive to dredge.<sup>14</sup> In the end, South will silt-up the same as before. It will evolve into a pond, a meadow, and a mudflat.**

The scenario just described is not far-fetched. Consider the area between West Harbor and the Little Marina Green shown in the next two photographs. The area could have easily been incorporated into West Harbor but it had chemicals and was expensive to dredge. Instead, it was developed into a public access beach complete with a spiral accessibility ramp. The planners and regulators at the time were no doubt sincere but some uses are

## Gashouse Cove

simply not viable in San Francisco. No one uses it today. The public access beach has become a mudflat. This experiment should be a lesson for BCDC... a Kayak/SUP Area sounds appealing but it's not necessarily a good idea for this location.



The photo above is from 1933. The photo below is from 2025. It's a wakeup call.



## Beneficial Use Condition

The central issue is whether South should be permanently configured in a way that prioritizes chemical storage at the expense of maintaining water quality and flexibility of use. BCDC does not need to resolve whether the proposed recreational use will succeed. Instead, it can preserve flexibility by adopting a conditional approval:

**“Chemical storage is permitted provided that a minimum depth of 8’ MLLW is restored and maintained for beneficial use throughout Gashouse Cove, both North and South, at all times.”**

This Condition preserves water volume and circulation and retains flexibility for future uses, while still allowing the proposed Kayak/SUP Area to be built in South.

### **Why should BCDC add this Condition?**

Because it represents a reasonable balance between remediation and preservation of Bay resources, while maintaining flexibility for future use.

Approving the permit without the Condition would result in the Contested Block being permanently dedicated to chemical storage and unavailable for uses requiring 8’ MLLW. It would also reduce water volume and limit circulation—outcomes that are detrimental to water quality and not required for remediation or for building the Kayak/SUP Area.

### **What if BCDC wants greater public access? What if BCDC believes that a Kayak/SUP Area in South will achieve greater public access?**

The Condition does not prohibit a kayak or paddleboard area. It allows such uses while preserving the ability to adapt the area if demand or conditions change.

### **What will it cost? Who pays for it?**

The Condition will increase project costs and may extend the schedule. However, the increase is incremental and relatively small compared to the total project cost.<sup>15</sup> All costs will ultimately be borne by ratepayers and the public through established mechanisms.<sup>16</sup>

### **Why 8’ MLLW and not some other depth?**

Because 8’ MLLW is the historical depth established for the beneficial use of Gashouse Cove.<sup>17</sup> Also, it’s justifiable because all chemicals are below 8’ MLLW.<sup>18</sup>

### **What is the purpose of “restore and maintain... at all times”?**

The Applicants have not maintained the required depth in the past.<sup>19</sup>

### **Is it necessary to state that chemical storage is permitted?**

No.

## Conclusion and Recommendation

BCDC is likely to approve some level of chemical storage in Gashouse Cove. The key decision is how to balance that necessity with the protection of Bay resources and beneficial use.

As currently submitted, the Project reduces water volume in part of the cove, limits circulation, and constrains future uses. These effects are detrimental and can be avoided. They are not required remediation and they are not required for a Kayak/SUP Area in South.

The proposed Condition provides a practical and measured solution. It allows chemical storage while preserving the physical characteristics necessary for water quality and flexibility of use. It avoids committing a prominent portion of the cove to a single, constrained use based on assumptions that may or may not prove out over time.

The recommendation is that BCDC add the Condition to its approval of the Project.

## End Notes

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- <sup>1</sup> 20230900 SF Bay Plan, pdf pg 28 Policies No 4 [\[Link\]](#)
- <sup>2</sup> 20010118 CCSF v PG&E 401-cv-00316-SBA - Case Documents pdf pg 51 [\[Link\]](#)
- <sup>3</sup> 20210325 PGE CCSF RPD FINAL SETTLEMENT Agreement Gashouse Cove [\[Link\]](#)
- <sup>4</sup> 20251219 RPD application to BCDC re MIRP *Table 5. Project Compliance with BCDC Laws and Policies*. The application answers “Consistent” to all laws and policies. The answer is disputed in this report.
- <sup>5</sup> 20180118 PGE speaks to RPD Comm re Gashouse Cove [\[Link\]](#).
- <sup>6</sup> 20180126 SF Chron PGE proposes fill Gashouse Cove [\[Link\]](#).
- <sup>7</sup> 20190913 PGE RPD TERM SHEET & MOU FINAL [\[Link\]](#).
- <sup>8</sup> 20210325 PGE CCSF RPD FINAL SETTLEMENT Agreement Gashouse Cove [\[Link\]](#).
- <sup>9</sup> 20240129 Ordinance draft Leg Ver2 [\[Link\]](#).
- <sup>10</sup> If there is a year with no profit, no payment is required.
- <sup>11</sup> Computing NPV requires a rate. The Court has established 7% for municipalities. On-line calculators were used to compute \$10M NPV for the 30-year, \$30M zero interest loan.
- <sup>12</sup> 20241219 RPD presentation to RPD Commission pdf pg 28 [\[Link\]](#)
- <sup>13</sup> Assume the maximum amount of chemicals that can feasibly be removed is 100%. Then, if the harbor were rebuilt to its prior design, 45% of the chemicals would be removed and 55% retained. The change-of-use in South results in 15% of the chemicals being removed and 85% retained. These numbers have been derived from feasibility studies that PG&E has submitted to the Water Board. Contact the author for the analysis.
- <sup>14</sup> It is not believable, even now, that RPD intends to maintain the 4’ MLLW. There is no over dredge in the plan. The Water Board wasn’t able to specify a minimum thickness for the protective layer while dredging - evidently because dredging is not part of the plan. The depth is shallow and the reach from outside so far that dredging will be difficult and expensive.
- <sup>15</sup> Why incremental? The Project already dredges North. The Condition would require it to dredge South too. Overhead and all other costs remain the same. Exactly how much money and how much time? A reasonable guesstimate is that the Condition will add less than \$50M to the total which the application places at \$220M. The time difference depends on how the dredge is scheduled, if it’s all done in the same season it’s possible there would be negligible schedule impact. A reasonable guesstimate for the time impact, however, is that the Condition will add six months to construction which the application places at 3-years.
- <sup>16</sup> Who pays? It depends on what the Applicants decide to do about splits, they may renegotiate and shift the numbers. Regardless, PG&E and RPD will ultimately pass all their costs on to constituents. The CA PUC allows PG&E to add remediation costs to gas rates without benefit of review. A rate adjustment for the utility’s remediations occurs automatically every year but the numbers are small and go unnoticed. RPD will pass some of its costs on to harbor tenants and it will tap the general fund for the remainder. There’s likely to be a shock from the increase in rents. Harbor tenants already fear the rent increase and a few oppose the Condition because it will only increase the increase. Note that: the financial impacts on constituents cannot be avoided, are for the total Project cost, and the Condition represents less than 20% of the total.
- <sup>17</sup> Many recreation boat owners consider 12’ MLLW as standard, so that depth was also considered. However, Gashouse Cove was never dredged to 12’ MLLW. 8’ MLLW is reasonable and the 50-year precedent.
- <sup>18</sup> All chemicals are below 8’ MLLW because any above that was removed when Gashouse Cove was dredged to 8’ MLLW to create a harbor in the late 1960s. With this in mind, the Condition can be seen as requiring the required protection layer to take away from the chemicals rather than take away from the beneficial uses.
- <sup>19</sup> The wording is not important but BCDC should have the ability to enforce its decisions if the required depth is neglected in the future.