

## KEY BENEFICIAL USES AND KEY AREAS

Focusing on What is Most Important

Good afternoon. My name is Bruce Posthumus; I'm on the staff of the San Diego Water Board.

As you know, some Board meeting agenda items have to do with one specific program, one specific facility, one specific part of one specific water body, and sometimes even one specific episode or event. This is not one of those agenda items. This agenda item is about the big picture. In NPR terms, this is not a "Here & Now" agenda item, this is an "All Things Considered" agenda item.

As you also know, some Board meeting agenda items involve taking some sort of formal regulatory action, such as amending the Basin Plan, adopting a permit, or issuing a cease-and-desist order. This is not one of those agenda items. This agenda item is about the Board's sense of how to approach and carry out its work in general. In that regard, it is similar to - and related to - past agenda items where the Board has considered and adopted resolutions in support of the Practical Vision, a Strategy for a Healthy San Diego Bay, restoration of aquatic ecosystems, and a monitoring and assessment framework.

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Please imagine with me, if you will, this hypothetical – strictly hypothetical – situation:

We, all of us in this room, in our individual lives away from work...

## the situation

- limited resources
- many things for which we need or would like to have resources
- some, but limited, flexibility in how resources can be used
- have to make decisions about how to allocate and use resources
- those decisions are made, one way or another
  - decisions best made by prioritizing
  - prioritizing best based on what is most important

... have limited time, limited financial resources, limited # of personal assistants, limited # of high-tech electronic devices, etc.

We have more to get and do than we can afford with the resources we have, but we have to live within our means; we cannot have it all; we cannot do it all, as much as we might like to. We have some but limited flexibility; we need to take care of basic needs: need get to and from work, need to pay taxes, and so forth.

So we have to make decisions and it's a zero sum game:

should we: do this or that?  
get this or that?  
do more of this or more of that?  
get less of this or less of that?

One way or another, decisions are made: we could flip a coin or draw straws, but I would suggest that those decisions are best made by prioritizing.

If we prioritize, how should we prioritize?

- based on what the in-laws are nagging us about? (could call that a squeaky wheel)
- based on what is easiest or least expensive? (could call that low hanging fruit)

I would suggest that priorities are best based on what is most important.

At the San Diego Water Board, and throughout the SD Region, the situation is not so different from that hypothetical situation – not only for the Board – *but also for other entities, including those regulated by the Board.*

And, as in the hypothetical situation, I would suggest that decisions about how to allocate and use resources are best made by prioritizing and that prioritizing is best based on what is most important

focusing on what is most important  
is fundamental to the effectiveness  
of the San Diego Water Board

**Why do I suggest prioritizing based on what is most important?**

**Because I think *focusing on what is most important is fundamental to the effectiveness of the Board.***

**The challenge for the Board is**

**not simply to do good things  
– but to do the most important things**

**not simply to help bring about environmental outcomes  
– but to help bring about meaningful environmental outcomes**

**and, of course, to do so with the limited resources that are available.**

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**So what is most important for the Board?**

**To answer that question, I suggest considering the purpose of the State and federal water quality statutes that the Board works to implement.**

what is the purpose of the statutes that the Board works to implement?

“... to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

**The federal Clean Water Act puts it elegantly and eloquently:  
*“... to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”***

why does the integrity, or health, of waters matter?

because “beneficial uses” of waters depend, to a greater or lesser degree, on the integrity, or health of waters

***Why does the integrity, or health, of waters matter? It matters because the “beneficial uses” (BUs) of water bodies identified in water quality control plans, such as the Basin Plan, depend on the integrity, or health of those water bodies.***

The work of the Board is about – it is for the sake of – BUs. The reason for protecting and restoring the chemical, physical, and biological integrity of waters in the San Diego Region is to ensure that BUs are not adversely affected by anthropogenic influences on those water bodies.

Because BUs are at the very core of the Board’s work, they are also at the core of determining what is most important for the Board, which is why the Practical Vision endorsed by the Board in November 2013 introduced the concept of “key beneficial uses” (KBUs) and “key areas” (KAs) to help the Board determine and focus on what is most important.

There are a number of BUs of waters in the San Diego Region. All of them matter; all of them are worth protecting; the Board has worked and will continue to work to protect all of them.

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But certain BUs, what we can call “KBUs,” are particularly important to protecting human and environmental health, so protecting and restoring the integrity, or health of waters for these KBUs is particularly important.

what are key beneficial uses?

beneficial uses “that are most critical to protecting human and environmental health”

***So what are KBUs?***

**The Practical Vision endorsed by the Board in November 2013 defines KBUs as the individual BUs and BU categories “*that are most critical to protecting human and environmental health.*”**

**KBUs tend to be vulnerable to adverse effects of anthropogenic influences on water body conditions.**

**And, in at least some cases, if water body conditions are suitable for a KBU, conditions are likely to be suitable for other BUs as well.**

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**The staff report identifies four categories of KBUs of waters in the SD Region.**

key beneficial use: drinking water supply

- municipal & domestic supply

**The KBU of drinking water supply, the supply of water for human consumption, is the defining use of the beneficial use of municipal & domestic supply.**

key beneficial use: fish & shellfish consumption

- fishing
- aquaculture
- shellfish harvesting

**The KBU category of fish & shellfish consumption includes three individual beneficial uses that involve or may involve capturing or gathering aquatic organisms to provide food for human consumption.**



key beneficial use: recreation

- contact water recreation
- non-contact water recreation

**The KBU category of recreation includes the beneficial uses of both contact and non-contact water recreation.**

key beneficial use: habitats & ecosystems (1<sup>st</sup> of 2)

- warm freshwater habitat
- cold freshwater habitat
- inland saline water habitat
- estuarine habitat
- marine habitat

**The KBU category of habitats & ecosystems includes a suite of individual beneficial uses, including these...**

key beneficial use: habitats & ecosystems (2nd of 2)

- wildlife habitat
- preservation of biological habitats of special significance
- rare, threatened, or endangered species
- migration of aquatic organisms
- spawning, reproduction &/or early development

and these.

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Just as there are a number of BUs, there are a number of types of water bodies, many individual water bodies, and many parts of individual water bodies in the San Diego Region. All of them matter; all of them are worth protecting; the Board has worked and will continue to work to protect all of them.

But, there are certain waters and places, what we can call “KAs,” where protecting and restoring the integrity, or health, of waters is particularly important for a KBU.

what are key areas?

“the waters and places where protection and restoration of the integrity, or health, of waters is most important for a key beneficial use”

***So what are KAs?***

**The staff report in the agenda package defines KAs as *“the waters and places where protection and restoration of the integrity, or health, of waters is most important for a key beneficial use”***

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**KAs can be identified in different ways, at different scales, and with different degrees of specificity.**

**The staff report for this agenda item identifies a number of KAs for each KBU. Here are just a few examples....**

key beneficial use:  
drinking water supply

key area example:  
Miramar Reservoir

photo source:  
[https://en.wikipedia.org/wiki/Miramar\\_Reservoir](https://en.wikipedia.org/wiki/Miramar_Reservoir)



**KAs for the KBU of drinking water supply include drinking water supply reservoirs.**

**Miramar Reservoir is an example of such a water body.**

**Water withdrawn from the reservoir for distribution to consumers is treated at the facility visible in the upper right of the photo.**

key beneficial use:  
fish & shellfish consumption

key area example:  
San Diego Bay

photo source:  
<https://coolsandiegosights.com/2015/08/18/fishing-friendship-and-life-on-a-downtown-pier/>



**KAs for the KBU of fish & shellfish consumption include waters and places that are intensively used for fishing and shellfish harvesting, especially for subsistence purposes.**

**San Diego Bay is an example of such a water body.**

**No fishing license is required to fish from piers, like this one, so piers are particularly important for people who are not well off financially and who fish to provide food for themselves and their families. Needless to say, fishing and shellfish harvesting for subsistence purposes is important with regard to environmental justice.**

key beneficial use:  
recreation

key area example:  
Mission Bay

photo source:  
[http://newscenter.sdsu.edu/sdsu\\_newscenter/news\\_story.aspx?sid=76187](http://newscenter.sdsu.edu/sdsu_newscenter/news_story.aspx?sid=76187)



**Waters and places that are intensively used for recreation are KAs for the KBU of recreation.**

**Mission Bay is an example of such a water body.**

**We can see non-contact water recreation occurring here. I would not be surprised if contact water recreation occurred sometime after this photo was taken, perhaps immediately afterwards.**

key beneficial use:  
habitats & ecosystems

key area example:  
Tijuana River Estuary

photo source:  
<http://trnerr.org/photo-gallery/nggallery/albummain/birds/page/1>



**KAs for the KBU of habitats and ecosystems include coastal lagoons and estuaries and other areas with habitats or ecosystems of special importance or value - or areas where such habitats or ecosystems could be restored.**

**Tijuana River Estuary is an example of such a water body. It is a place where considerable work has been done to protect and restore habitats and ecosystems of special importance and value – and where such work continues.**

**I'm just an old engineer, so I'm not an expert in these things, but I think I see at least three types of coastal wetland habitats and at least three species of birds in this photo.**

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**I posed the question of what is most important for the Board – and I've talked about the integrity, or health of waters, about KBUs, and about KAs.**

***So what is most important for the Board?***



what is most important  
for the San Diego Water Board?

- the work that contributes most  
to protection and restoration  
of the integrity, or health, of waters  
in key areas for key beneficial uses

**This is how I would answer that question, in simple terms:**

**What is most important for the Board is the work that  
contributes most to protection and restoration of the integrity,  
or health, of waters in key areas for key beneficial uses.**

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**If that makes sense, and I hope it does, I think it also makes  
sense to try to apply the KBU/KA concept to the work of the  
Board – *and to the work the Board directs other entities to  
undertake...***

applying the key beneficial uses / key areas concept  
to the work of the Board

*- and to the work the Board directs other  
entities to undertake -*

can help the Board

*- and those other entities -*

focus on what is most  
important

**... because I think doing so can help the Board – *and those other entities* – focus on what is most important.**

**Table 2 in the staff report lists a number of potential applications of the KBU/KA concept to the Board’s work.**

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**Here are a few quick examples of potential and actual applications of the KBU/KA concept.**

## application example 1

### TMDL related to contact water recreation (REC-1)

- in a place that is not a key area for REC-1?
  - e.g., where the intensity of REC-1 use is low, for reasons other than water quality

- or -

- in a place that is a key area for REC-1?
  - e.g., where the intensity of REC-1 use is high

**The first example has to do with deciding where to devote resources to development and implementation a TMDL or something similar.**

**Development and implementation of TMDLs and even alternatives to TMDLS can be very resource-intensive and time-consuming.**

**So if the Board is going to do a TMDL or something like that, I would strongly recommend that it be done for a place that is a KA for a KBU.**

## application example 2

- high level formal enforcement action (CDO, CAO, ACL)
  - for violations that did not affect a key beneficial use?
- or -
- for violations that did affect a key beneficial use in a key area for that key beneficial use?

**The second example has to do with enforcement priorities.**

**Staff has started to consider KBU and KA, along with other factors, in decisions about priorities for enforcement action.**

**Everything else being equal, higher priority would be given to enforcement action for violations that involve a KBU in a KA area for that KBU.**

## application example 3

- monitoring & assessment of the integrity, or health, of San Diego Bay
  - monitor a standardized suite of contaminants in the vicinity of existing individual discharges
  - or -
  - consider key beneficial uses and key areas for those beneficial uses, including:
    - characteristics of those key beneficial uses and key areas
    - concerns about those key beneficial uses and key areas
    - parameters pertinent to those key beneficial uses and key areas
    - influences that have affected or could affect those key beneficial uses and key areas

**The third example has to do with monitoring & assessment of the health of San Diego Bay, which is a KA for several KBUs.**

**KBU/KA concept was incorporated into the “Strategy for a Healthy San Diego Bay” that the Board endorsed in June 2015.**

**In keeping with that Strategy, the Board staff is using the KBU/KA concept to help guide implementation of the Framework for Monitoring & Assessment that the Board endorsed in December 2012.**

**Staff has completed initial assessments of conditions for two KBU of San Diego Bay. I think you heard about those at the October 2016 Board meeting. Staff has also started working on or planning for initial assessments of conditions for other KBUs of San Diego Bay.**

**Staff is also considering KBUs & KAs as it starts planning for development and implementation of improved monitoring & assessment programs for San Diego Bay.**

## application example 4

- measuring the effectiveness of the San Diego Water Board
  - programmatic outputs?
    - e.g., number of regulatory actions completed
  - or -
  - meaningful environmental outcomes?
    - e.g., percentage of key areas in good or excellent condition for the corresponding key beneficial uses

**The fourth example has to do with measuring the effectiveness of this agency, the San Diego Water Board.**

**Programmatic outputs might not be easy to produce or count, and producing and counting them might take a while.**

**But those outputs are quick and easy compared to meaningful environmental outcomes.**

**It can be very difficult and take a very long time to produce meaningful environmental outcomes – and it can even be difficult to count or measure them.**

**But what really matters is progress in protecting and restoring the integrity, or health, of waters for KBUs in KAs, and that is what meaningful environmental outcomes are about.**

## application example 5 (1st of 2)

- identifying key beneficial uses and key areas is only the first step in determining and focusing on what is most important
- additional steps might include:
  - identify protection and restoration needs and opportunities
  - identify protection and restoration goals
  - identify actions needed to achieve goals
  - establish meaningful measures of effectiveness, progress, and success
  - identify and collaborate with other public health, natural resources, and regulatory agencies
  - identify other entities to be involved and their roles
  - take the actions needed to achieve goals
  - evaluate effectiveness, progress, and success

**The last example has to do with taking the additional steps beyond identifying KBU and KA.**

**Identifying KBU and KA is a critical first step in helping the Board determine and focus on what is most important – but it is not the only step.**

**The additional steps have to do with determining what work actually needs to be done to protect and restore the integrity, or health, of waters in KA for KBU – and then actually doing that work.**

**The additional steps might include these, among others.**

## application example 5 (2<sup>nd</sup> of 2)

development and implementation of  
key beneficial use / key area-based management strategies  
for protection and restoration  
of the integrity, or health, of waters  
in the San Diego Region

**The additional steps could be taken as part of development and implementation of KBU/KA-based management strategies.**

**Development of such strategies could help the Board determine which work would contribute most to protection and restoration of the integrity, or health, of waters in the San Diego Region.**

**Implementation of such strategies could help the Board focus on that work.**

**Development and implementation of such strategies could help the Board  
to anticipate, as well as react;  
to play offense, as well as defense;  
to work more effectively with other agencies, as well as on its own.**

**I think this potential application could be particularly useful in helping the Board be more strategic and more proactive, and therefore, more effective.**

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**I hope you will agree that KBU/KA concept can help the Board – and regulated entities – focus on what is most important.**

**But we need to be realistic....**



## reality check

- many factors to consider in decisions about how to prioritize the Board's work and allocate and use the Board's resources
  - legal obligations
  - programmatic obligations
  - funding source obligations
  - environmental justice
  - etc.
- key beneficial uses and key areas should always be among the factors considered in doing so

**The Board has many things to consider in decisions about how to prioritize its work and allocate and use its limited resources, including various legal, programmatic, and funding-source obligations, among other factors, such as environmental justice.**

**In suggesting that the KBU/KA concept can help the Board focus on what is most important, I do not mean to suggest that those obligations or other factors can or should be ignored.**

**However, as the staff report suggests, I do think that KBU and KA should always be among the factors considered in making decisions about the Board's priorities and allocation and use of the Board's resources.**

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**Before I wrap up, I want to take care of a little business to make sure we are all on the same page.**

## agenda package materials

- executive officer summary report
- supporting document no. 1: tentative resolution
- supporting document no. 2: staff report
- supporting document no. 3: written comments received by February 28
- supporting document no. 4: additional written comments received by March 7

**First, the agenda package materials.**

**These are the agenda package materials for this item.**

**I trust all of you have all of them.**

**I apologize for neglecting to put the identifying header in the upper right hand corner of supporting document no. 3**

## staff report

- executive summary
- section I: introduction
- section II: key beneficial uses
- section III: key areas
- section IV: applications
- appendix: overview of each key beneficial use
  - characteristics, concerns, parameters, and influences
  - key areas
  - regulatory, public health, and natural resources agencies

**Second, the staff report, Supporting Document No. 2.**

**This is an outline of the staff report.**

## staff report tables and attachments

- key areas for various key beneficial uses
  - San Diego Region, general: table 1
  - San Diego Region, more specificity, with examples: tables 3, 5, 8 & 11
  - San Diego Bay, more thorough: tables 6, 9 & 12
- some potential applications of the key beneficial uses / key areas concept
  - table 2
- links to sources of additional information about locations of key areas for various key beneficial uses
  - tables 4, 7, 10 & 13
- overview of beneficial uses
  - attachments 1 & 2
- overview of water body types
  - attachments 3 & 4

### **Third, the tables and attachments in the staff report**

**About half the of the staff report consists of tables of one sort or another, including the attachments, which are also tables.**

**This indicates what the various tables and attachments are about.**

## tentative resolution would:

- support use of the key beneficial uses / key areas concept to help focus on what is most important in order to effectively protect and restore the integrity of waters in the San Diego Region
- express the Board's commitment to crafting its regulatory directives so as to encourage or require the entities it regulates to focus on what is most important
- express the Board's commitment to considering key beneficial uses and key areas in decisions about how to prioritize its work and how to allocate and use its resources
- direct the Executive Officer to periodically report to the Board
- endorse the staff report

### **Fourth, the tentative resolution, Supporting Document No. 1.**

**This is what the tentative resolution would do. I'm afraid this slide isn't much shorter than the "resolved" section of the tentative resolution itself.**

**As with those other resolutions that I mentioned with the very first slide, resolutions in which the Board has expressed support for the Practical Vision, a Strategy for a Healthy San Diego Bay, restoration of aquatic ecosystems, and a monitoring & assessment framework, the resolution is important for helping to make things happen, but the resolution is really only the beginning.**

**Resolving is good, but it isn't enough to resolve; it's the implementation, it's the action that follows the resolution that really matters.**

**Which is why the periodic reports to the Board are important.**

## written comments

- navigation should be considered a key beneficial use of San Diego Bay
- Agua Hedionda Lagoon should be considered a key area for the key beneficial use of contact water recreation (REC-1)
- additional links should be included in the staff report tables listing sources of additional information about locations of key areas for key beneficial uses

### SD Bay beneficial use of navigation (NAV)

Understand NAV is very important for the Port of SD; I do not think it is a KBU for SDWB

1. BU of NAV does not fit definition of KBU in the PV endorsed by the Board in 11/2013
2. accordingly, the SD Bay Strategy endorsed by the RB in 6/2015 did not include NAV as a KBU of SD Bay

Most of the other comments from the Port are best addressed as part of the process of implementation of the Strategy for a Healthy SD Bay endorsed by the Board in 6/15.

### Agua Hedionda Lagoon REC-1:

maybe; suggest that be left to the EO

### additional links

staff appreciates the additional links provided by the Port and SD County Water Authority and recognizes there may be many, many more

### general notes re: staff report & the tentative resolution pertinent to some comments

1. staff identified KBUs & KAs using professional judgement; no algorithm or formula; might have left something out or made mistakes
2. tables in staff report are intended to be correct but not exhaustive
3. “endorsement” of the staff report by the Board should not be understood to mean that anything is set in stone; “endorsement” should be understood to mean that the Board supports the general KBU/KA concept and moving forward with applying it to the Board’s work
4. staff report is a starting point, not the last word; would hope the Executive Officer would be understood to have the authority to refine, adjust, adapt, improve, and implement as necessary and appropriate

## the situation

- limited resources
- many things for which we need or would like to have resources
- some, but limited, flexibility in how resources can be used
- have to make decisions about how to allocate and use resources
- one way or another, those decisions are made
  - decisions best made by prioritizing
  - priorities best based on what is most important

It seems a long time ago now, but if you still remember the strictly hypothetical situation we started with, please recall that we had to make decisions about how to allocate and use our limited resources.

Having it all, doing it all, however desirable that might have seemed, was not a realistic option.

It's the same for the Board - *and the entities regulated by the Board*.

So the question is: How should decisions about allocation and use of limited resources be made?

I think and I hope the KBU/KA concept can help the Board make those decisions, and in doing so, help the Board – *and the entities regulated by the Board* – focus on what is most important.

And I hope that, in turn, will help the Board to be effective, to be even more effective, in its work to protect and restore the chemical, physical, and biological integrity of waters in the San Diego Region.

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With that, I will do my best to answer any questions you may have.

questions?