

CREEKS TASK FORCE BACKGROUND REPORT

Approved April 17, 2006

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I. INTRODUCTION

In November of 2004, the Berkeley City Council established a Task Force to study the regulation of creeks and culverts in Berkeley. The goal of the Creeks Task Force (CTF) is to review and make recommendations regarding (i) the existing Creeks Ordinance, Berkeley Municipal Code Chapter 17.08 (the “Creeks Ordinance” or the “Ordinance”), and (ii) overall City policy concerning creeks and culverts. The City Council set a deadline of May 2006, by which time final recommendations from the CTF are to be submitted to the Planning Commission and to the Council. This report summarizes the CTF’s work.* The final recommendations of the CTF are separately set forth in an accompanying cover memorandum prepared by CTF Staff, who recorded all action items addressed and all decisions made by the CTF.

At the beginning of the CTF’s work, CTF members agreed in their Work Plan that they should seek to develop recommendations designed to further a set of broadly-stated objectives. That set of objectives serves, in effect, as a mission statement endorsed by the CTF for regulating creeks and culverts in Berkeley. As set forth in the CTF’s Work Plan, these objectives are as follows: Within the realities of a densely developed urban setting, and while striking a balance between the need to maintain and improve the natural environment and the interests of private property owners, the City should seek to:

- *Protect the remaining open water courses and their associated riparian zones, and to regulate culverting.* Culverting, pollution, erosion and deterioration of creek-beds and the associated corridors that provide natural habitat and landscape along creeks (“riparian zones”), continue today and present the same kinds of risks that were present when the Creeks Ordinance was first adopted.

*While each CTF Member may hold his or her own individual views, the CTF adopted this Report at its April 17, 2006 meeting as a full, fair, and accurate summary of the record considered by the CTF, the CTF’s deliberations, and the basis for the CTF’s recommendations. The primary author of the Report was CTF Member Jon Streeter.

- ❑ *Promote the preservation, rehabilitation, and naturalization of existing and future open water courses and their associated riparian zones as part of the City’s underlying natural landscape system.* Although the City is densely built-out with very little of its natural landscape setting remaining, the City still has a network of riparian zones. Opportunities arise from time to time to restore and extend these riparian zones.
- ❑ *Establish a watershed-based policy framework for managing surface-water runoff from the hills to the Bay.* Creeks and culverts are just one part of a larger system of collecting and moving surface water runoff from the hills to the Bay. The entire runoff system is subject to increasingly stringent water quality and quantity regulation, for both public entities and private properties alike. The City’s approach to managing runoff must take into account the relationships which do and should exist between creeks and culverts, on the one hand, and the City’s engineered stormwater drainage system, on the other hand.
- ❑ *Establish a regulatory and administrative framework for what has already been developed and what can be developed along water channels, how further development can take place, and under what conditions that development can take place.* Clear, enforceable, equitable, and sound standards for permitting appropriate development along water channels are needed for private and public property alike. This framework must balance the rights of property owners on or near water channels with the objective of preserving the natural environment.

II. BACKGROUND OF THE ORDINANCE

A. Text and Structure of the Ordinance

Chapter 17.08 of the Berkeley Municipal Code, entitled “Preservation and Restoration of Natural Watercourses,” regulates any “Creek,” a term that is defined in the Ordinance as follows:

"Creek" means a watercourse which carries water from either a permanent or natural source, either intermittently or continuously; and which runs in a defined channel or continuous swale or depression, which later merges with a larger watercourse. The definition includes a channel, swale, depression, or watercourse, whether or not culverted. The definition excludes any part of an engineered system which was developed by a public agency for collection of storm or flood waters, provided however that such part does not follow the original course of the creek. The City of Berkeley may maintain maps and other reliable records, reflecting such creeks for the guidance of the public. The word "creek" will be synonymous with "natural watercourse" as used in the chapter.

Berkeley Municipal Code, Chapter 1708.030 (A).

The Creeks Ordinance begins with a broad “Statement of Purpose” setting forth the overall objective of the Ordinance. That objective is to establish policy on culverting, rehabilitation and restoration of natural waterchannels, and management of the watershed. BMC

17.08.020 (A)-(E). The Ordinance then sets out a series of eight specific “Findings,” all generally acknowledging the importance of watershed management for ensuring public safety, the problems created by “structural solutions” in and around watercourses (i.e. culverting, channelization, riprapping), and the advantages to the community of maintaining creeks in a condition as close to their “natural condition” as possible. Most of the Findings are factual in nature. Two of the Findings, however, have a definite policy orientation; those Findings read, “Streams and their riparian environment should be held as an important public asset in an increasingly endangered environment that provides an unusual urban ecological habitat with recreational and aesthetic value,” BMC 17.08.020 (F), and “[c]ulverting or channelization of existing open creeks should only occur if there is an extreme hazard to public health or safety and no other alternatives can prevent the hazard,” BMC 17.08.020 (G). The Findings are followed by a series of thirteen definitions, each defining a term that is used somewhere in the Ordinance -- most importantly, the term “Creek,” which appears throughout.¹

Based on these Findings and Definitions, the Creeks Ordinance regulates “Creeks” in three basic ways. *First*, the Ordinance prohibits any “obstruction” of a Creek,” i.e. filling it in, putting obstructions in it, obliterating it, or building a bridge over it. BMC 17.08.040. There is a grandfather clause in this portion of the Ordinance exempting any obstruction that preexisted January 4, 1990, the effective date of the Ordinance. *Second*, the Ordinance requires setbacks of 30 feet from the “Creek” centerline for all “newly constructed” roofed structures.² BMC 17.08.050. Approval to construct a non-confirming structure within the 30-foot setback may only be obtained by Variance, except for residential additions in a narrowly defined set of circumstances where “all portions of the creek on the subject parcel are enclosed within a

¹The term “Culvert” is not defined, at least not as a noun. It is defined as a verb. *See* BMC 17.08.030 (B) (“Culverting” means the placement or construction of a pipe or box shaped conduit in a creek bed for the purpose of conducting water.).

²The limitation to “newly” constructed structures, in essence, operates as a grandfather clause that exempts from the Ordinance all conditions that existed as of its effective date.

culvert,” in which case approval may be obtained by Conditional Use Permit (“Use Permit”).³ *Third*, the Creeks Ordinance prohibits the construction in a Creek of any “wall, culvert, drain, bulkhead, or other structure” or the placing of any “riprap or any debris in the channel or on the banks” of any Creek. BMC 17.08.060. A permit may be obtained for such construction from the City Engineer only if certain specified alternatives to it are feasible (i.e. excavating to restore natural meander; clearing of debris; floodproofing or minor redesign or relocation of structures; removal of structures; bank stabilization; vegetation management; set back levee construction; or changes in site design).⁴

³The administrative process specified in the Creeks Ordinance for obtaining exemption from the setback requirement in BMC 17.08.050 is quite important to how the Ordinance affects the public. As a practical matter, Variances are virtually impossible to obtain. In theory Use Permits offer more flexibility than Variances, but because the administrative findings that must be made before a Use Permit will be granted are so detailed and strict, as a practical matter, they are not much more readily available than Variances. *See* Memorandum from Erin Dando, CTF Secretary, to CTF Members re “Overview of Berkeley Zoning Process,” at 3-4 (December 5, 2005) (“Dando Zoning Process Ordinance Background Memorandum”). Moreover, the Planning Department has no staff-level discretionary authority to grant Use Permits. In all cases -- whether the applicant seeks a Variance or a Use Permit -- approval may be granted only by the Zoning Appeals Board (“ZAB”) or on appeal from the ZAB to the City Council. *See* BMC 17.08.050 (A) (“Approval for...construction [within the setback] may be granted only by appeal to the [ZAB] for a Variance. The decision of the [ZAB] may be appealed to the City Council pursuant to Chapter 23B.44 of the Berkeley Zoning Ordinance”); BMC 17.08.050(B) (“A residential addition to an existing single-family home may be constructed through the issuance of a Conditional Use Permit pursuant to Chapter 23B.32 of the Berkeley Zoning Ordinance if the [ZAB] or the City Council on appeal makes all of the following findings...”). Thus, not only are the criteria for obtaining relief from the setback requirement extremely difficult to meet, but the process for obtaining relief entails lengthy delay and expense. *See* Dando Zoning Process Ordinance Background Memorandum (attached table entitled “Zoning Permits” setting forth time and fees generally associated with applications for Variances and Use Permits).

⁴There is a marked difference between the administrative process specified in the Ordinance for obtaining approval to construct culverts, rip rap and other prohibited structures under 17.08.060, on the one hand, and the administrative process for obtaining relief from the setback requirement under 17.08.050, on the other. The Planning Department has authority under the Creeks Ordinance to grant permission for a prohibited structure under 17.08.060 by Administrative Use Permit (“AUP”). *See* BMC 23.B28.010. An AUP is discretionary and may be obtained more easily than a Use Permit or a Variance; it is the third, most-flexible tier of permitting regulation that is used in Creeks Ordinance administration. In terms of time and expense, the process for obtaining an AUP is less burdensome to applicants than the process for obtaining a Variance or a Use Permit. While any AUP application may be referred to the ZAB if it has “special

The Creeks Ordinance permits the rebuilding of any “structure, or any portion thereof” -- notwithstanding the setback restrictions -- where the original structure was “destroyed by causes such as fire, earthquake or flood,” so long as the rebuilt structure is “reasonably similar in use, dimensions, floor area, square footage, lot coverage and footprint to the destroyed structure *and complies with all currently applicable building codes.*” BMC 17.08.055 (A)-(B) (emphasis added). If a culvert exists on the parcel where the rebuilding takes place, the owner proposing to rebuild must make a showing to the City Engineer that “the proposed replacement structure will not negatively affect the culvert and that the replacement structure is designed with foundation, such as pile supported, which does not exert any bearing load on the culvert. “ BMC 17.08.055 (C). This rebuilding exemption, by its terms, applies only to the setback restrictions in the Creeks Ordinance, not to the prohibition on creek “obstructions” or to the anti- “culverting” and “rip-rapping” section of the Ordinance. BMC 17.08.055 (“Notwithstanding Section 17.08.050 [the section establishing setback restrictions], a structure, or any portion thereof, may be replaced or reconstructed as long as all the following conditions exist....”).

Violation of the Creeks Ordinance is punishable as an infraction and may be enjoined or abated through an enforcement action brought by the City Attorney. BMC 17.08.070. For any violation of the Creeks Ordinance -- the creation of any illegal obstruction to Creeks under BMC 17.08.040, the failure to observe setback requirements in the vicinity of Creeks under BMC 17.08.050, or the construction of prohibited structures in or around Creeks under BMC 17.08.060 -- the City Attorney is required to declare the violation a public nuisance and initiate legal proceedings against the violator. An enforcement action by the City Attorney may be commenced, however, only if it is ordered by the City Council. BMC 17.08.070 (“the City

neighborhood or community significance,” *see* BMC 23B28.010, the Planning Department has discretion to resolve such applications at staff level. This differs significantly from the administrative process for approval of a non-conforming setback condition under BMC 17.08.050, which provides no staff-level discretion and states that exceptions may be granted only by the more burdensome process of obtaining a Variance or a Use Permit at ZAB or City Council level.

Attorney of said City shall [initiate enforcement action]...upon order of the City Council”).

While disputes between neighbors have arisen under the Creeks Ordinance in the context of Variance proceedings, no public enforcement proceedings for violation of the Ordinance have ever been brought by the City Attorney.

B. Prior Legislation, Legislative History, Administrative Interpretation and Application, Amendments

1. Prior Legislation

There is a long history to the regulation of natural watercourses by ordinance in Berkeley, going back more than a century. The first such ordinance, a measure “Regulating and Preserving Natural Water Courses and Natural Drains and Gullies, which carry off Storm Waters or other Surface Waters Precipitated by Rains,” was adopted by the City’s Board of Trustees in 1897. Modifications and updates to this early legislation were adopted in 1900 and again 1928.⁵ The early legislation, like the current Creeks Ordinance, generally prohibited obstruction of natural watercourses (1897 and 1900) and construction of structures -- including culverts -- within or around natural watercourses (1928). Indeed, the prohibitions in BMC 17.08.040 (obstructions) and 17.08.060 (construction of walls, culverts, drains, bulkheads or other structures) are direct descendants from the earlier legislation; the essential wording of the ordinance in these areas is copied almost exactly from the earlier versions. Comparing the current Creeks Ordinance in an overall sense to the earlier legislation, two points stand out. First, the scope of the earlier legislation appears to have been limited to open creeks. Second, the establishment of a setback requirement was new in 1989; the use of setbacks as a regulatory tool had not been used before.

2. Legislative History

When the current Creeks Ordinance was proposed in 1989, it appears to have been adopted with little fanfare and not much public awareness beyond a few interested agencies and creeks activists who were involved in proposing it. No one suggested at the time that the

⁵Neighbors on Urban Creeks (“NUC”) at 2-3 (August 2005), presented at September 12, 2005 CTF Meeting [cited below as “NUC, Ordinance History”].

proposed ordinance might represent a significant departure in any respect from previous legislation in Berkeley governing natural water courses. The immediate impetus for the adoption of the Creeks Ordinance appears to have been an item that Mayor Loni Hancock placed on the City Council Agenda on March 7, 1989.⁶ That item referred a “draft Creek Preservation and Restoration Ordinance to the Planning Commission for review and recommendations.” According to Mayor Hancock’s proposal, representatives of environmental and stream organizations were to be included in the review and recommendation process.⁷

Eight months later a proposed Creeks Ordinance came before the City Council, not from the Planning Commission, but from the Parks and Recreation Commission.⁸ The Parks and Recreation Commission developed the proposed new ordinance in collaboration with the Urban Creeks Council, the State Department of Water Resources, and the Public Works and Planning Commission, and then, on November 21, 1989, forwarded the text of the proposal to the City

⁶See NUC, Ordinance History at 4.

⁷According to the NUC’s research, the item placed on the March 7, 1989 City Council Agenda by Mayor Hancock attached an article by the Urban Creeks Council that set forth relevant background information. Although the Task Force did not receive a copy of that article, the summary of it as described by NUC contains some interesting observations about the provenance of the Creeks Ordinance, including most importantly the setback requirement. According to NUC:

“[A]ttached to Mayor Hancock’s proposal was an article from the Urban Creeks Council stating that the ‘statewide stream restoration movement began in the early 1980s – centered in Berkeley....The article went on to say that the first draft of a proposed ordinance [dates from] April 1983 [and was designed] to respond to ‘practical problems occurring in the management of streams in Berkeley’ such as flooding, bank erosion...and bursting of a culvert at the corner of Hearst and Euclid Streets. It was stated that this new ordinance was needed to ‘avoid expensive problems by requiring a minimum setback of new structures from creek channels. The ordinance...would ...require that new construction be set back from creeks by 30 feet. *This set back was described as a ‘compromise’ between regulations in other jurisdictions that required setbacks that ranged from 25 to 100 feet.*”

NUC, Ordinance History at 4 (emphasis added).

⁸NUC, Ordinance History at 4; Memorandum from Laura McKinney, Deputy City Attorney, to Members of the Creeks Task Force, June 29, 2005, at 1 [cited below as “McKinney Ordinance Background Memo”].

Council, accompanied by a brief memorandum recommending its adoption.⁹ The City Council accepted the recommendation and adopted the Ordinance as proposed, adding it to the Municipal Code at Chapter 17.08 effective January 4, 1990.¹⁰ There does not appear to have been much, if any, public participation in the development of the Ordinance, other than through the groups that collaborated on the recommendation supporting it. There were certainly no public hearings or other efforts to solicit input from potentially affected parties.

Consistent with the broad Findings in the Ordinance itself, the Parks & Recreation Recommendation Memo states that the proposed legislation was designed to promote the “preservation and restoration of natural watercourses in the City of Berkeley.” Parks & Recreation Recommendation Memo at 1. According to the Recommendation Memo, the new ordinance would “primarily” prohibit further “culverting of existing open creeks,” and “secondarily,” would “require permitting for rip-rapping work, which may cause problems if improperly done.” Parks & Recreation Recommendation Memorandum at 2. The Recommendation Memo also makes certain statements emphasizing that the proposed ordinance would have a limited impact, and that, to the extent the ordinance created any new regulatory burdens, the problems it sought to address were either rare or existed on few properties:

This ordinance does not require the opening of presently culverted creeks. Proposals to culvert existing creeks are very rare in Berkeley and only one such request [has been] submitted to Engineering in the past ten years. This ordinance would forbid... any major construction within 30’ of the centerline of any creek...[The setback]... provision of the ordinance would affect a very limited number of vacant building lots in the City of Berkeley, and require the owner to receive a Variance from the Board in order to complete some construction properties.

Parks & Recreation Recommendation Memo at 2 (emphasis added).

In addition to forwarding the proposed ordinance, the Parks & Recreation

⁹See Attachment A to McKinney Ordinance Background Memo (copy of Memorandum from Parks and Recreation Commission, Chairperson Carole Schemmerling, to the Mayor and Members of the City Council re Ordinance For the Preservation and Restoration of Natural Watercourses and Negative Declaration for that Ordinance (November 21, 1989) [cited as “Parks & Recreation Recommendation Memo” or “Recommendation Memo”]). .

¹⁰Ordinance 5961-NS § 2, 1989.

Recommendation Memo attached two other items for the City Council’s consideration. There was a report from the City Manager, Hal Cronkite, recommending adoption. As Mr. Cronkite interpreted the proposed ordinance, “[t]here appears to be a limited number of structure to which this ordinance will be applicable.”¹¹ The Recommendation Memo also attached a proposed Negative Declaration (“Neg Dec”) making certain findings to indicate there was no need for a full Environmental Impact Statement under the California Environmental Quality Act. The Neg Dec contains an Environmental Initial Study and an Environmental Checklist and Discussion form. These documents contain a variety of representations about the proposed ordinance, all suggesting that it would have little environmental impact. Among other things, the supporting material for the Neg Dec stated that the proposed ordinance would not result in substantial alteration of any present or planned land use and would not have any appreciable affect on housing.

3. Administrative Interpretation and Application

Within a short time after the Ordinance was adopted in 1990, questions began to arise concerning certain ambiguities in its language. These ambiguities centered on the basic definition of “Creek” in the Ordinance, a natural focal point for controversy since the “Creek” definition marks out the scope and reach of the Ordinance. As adopted in 1990, the original definition of “Creek” was narrower than it is now. The original language read:

“Creek” means a naturally occurring swale or depression, which carries water either seasonally or year-round, and which appears as an above ground creek on the Geological Survey Map and in the 1975 Berkeley creeks map prepared by the Planning Department to show the approximate undergrounding of the watercourse. The word creek will be synonymous with natural watercourse as used in this chapter.

5961-NS § 2, 1989.

(a) The 1111 Eighth Street Case. The first question that surfaced concerning this definition had to do culverts. In 1991, the owners of commercial property at 1111 Eighth Street wanted to expand their building to within 20 feet of Cordornices Creek, so they applied for an

¹¹NUC, Ordinance History at 5.

AUP permitting them to culvert a 15 to 20 foot section of open creek at the rear of their building. When the Planning Department granted their request on a discretionary basis, the question arose whether a permitted culvert was nonetheless subject to the setback requirements of the Ordinance.¹² The City Attorney issued an opinion on December 5, 1991 opining that the setback requirements do apply to culverts, whether they are permitted or not. The opinion letter was brief and contained very little explanation. It simply concluded that the “plain language” of the Ordinance “does not distinguish between above and underground creeks, nor between culverted and non-culverted creeks.”

(b) The 137 Bret Harte Road Case. The next area of controversy arose nearly a decade later and had to do with maps. Language in the definition of “Creek” as originally adopted in 1990 referred to watercourses depicted “on the Geological Survey Map and in the 1975 Berkeley Creeks map prepared by the Planning Department...” Shortly after adoption of the Ordinance, however, the Planning Department updated its map, and the updated map showed many more creeks than were shown on the 1975 map. In the year 2000, the owners of property at 137 Bret Harte Road applied for an AUP approving a non-conforming setback condition on their property. A dispute arose between the applicant and a neighbor over the applicant’s assertion in the AUP application that the creek on the property was not covered by the Creeks Ordinance because it was not shown as an “above ground” creek on the either Geological Survey Map or the 1975 Berkeley creeks map.

The City Attorney issued an opinion on December 1, 2000 interpreting the Ordinance to cover the creek on the property at 137 Bret Harte Road, despite the fact that the creek appears on neither of the maps mentioned in the Ordinance. The opinion discusses the legislative history of the Ordinance; draws from that history an intent to “protect all naturally occurring waterways in

¹²The practical consequence of the issue was that the setback requirements, if applicable, triggered the more stringent requirements for obtaining a Use Permit, which requires a strict set of findings to be made by the ZAB. An AUP, by contrast, can be granted on a discretionary basis by the Planning Department and in fact was granted in that case.

Berkeley, not just those appearing on a particular map,” and concludes that the plain language of the Ordinance need not be followed, because to do so would frustrate the purpose of the Ordinance. According to this interpretation, the “definition of ‘creeks’ in the ordinance attempted to assist in the identification of above ground creeks, but cannot be read to limit the protection the City intended to extend to all creeks in Berkeley.”

(c) The 2323 Glen Avenue Case. Next came the first case under the Ordinance involving an application for a Variance. That case involved a culvert, and thus required an application of the Ordinance based on the City Attorney’s December 5, 1991 opinion that culverts are “Creek[s]” within the meaning of the Ordinance. The parcel involved was located at 2323 Glen Avenue. At issue was a proposed 829-square foot addition to an existing one-story house on a lot bisected by Cordornices Creek, culverted in this location but open on nearby lots. The project conformed to the standards of the R-1 zoning district in which it was located, except that the rear-yard setback had to be reduced from 18 feet to 17 feet and the owners needed a Variance reducing the 30-foot setback from the culvert to 7 feet. An organized group of neighbors and creeks activists participated in the hearing process and opposed a Variance.

The legal backdrop to the case had to do with the highly demanding standards for obtaining a Variance. A Variance is a rarely-used remedy that may be granted only after a very stringent showing has been made by the applicant. Among other things, (i) conditions on the property must be so unique that they can be deemed “exceptional or extraordinary” in the sense that they “do not apply generally to land, buildings and/or uses in the same [zoning] District” and (ii) the granting of the Variance is necessary for the owner’s “use and enjoyment of substantial property rights.” These standards are tailored for owners of vacant land who are wholly unable to build due to setback restriction -- and who thus have an legitimate argument that they have been blocked from use and enjoyment of substantial property rights -- but in the case of owners who simply wish to remodel existing structure, the standards are very difficult to meet. The issue in the 2323 Glen Avenue case was whether the owner could meet these strict criteria in the context of a remodel.

In the end, the owners of the 2323 Glen Avenue property prevailed, but only after obtaining a special exemption that is specific to their property. The case first came before the ZAB on July 22, 2002. It did not reach ultimate resolution until November 22, 2003, after the ZAB initially made the necessary findings supporting a Variance, the City Council overruled the ZAB and remanded for further findings, and then the ZAB once again made the necessary findings for a Variance. At that point, the Ordinance was amended to permit relief from the setback requirements for culverted creeks under a Use Permit -- not a Variance -- based on findings specifically designed for the 2323 Glen Avenue case. Ultimately, the City Council affirmed the ZAB, subject to the special amendment going into effect.

The passage of a special Use Permit amendment tailored to the property conditions at 2323 Glen Avenue allowed the City Council to rule for the owners in that case, without having to approve the ZAB's findings supporting a Variance. Although the result was driven by the specific circumstances presented there, the case is noteworthy for a number of reasons on a big-picture level. From the standpoint of property owners, it illustrates well the difficulties of obtaining even modest relief from the setback requirements.¹³ By the same token, from the standpoint of policy makers, the case provides a good example how hard it is to tailor administrative exemptions in a way that is both fair to property owners and at the same time meets the overall goals of the Ordinance.¹⁴

¹³According to a public speaker who appeared before that CTF, the owners of the residence at 2323 Glen Avenue, a young couple who sought to expand their house to accommodate a growing family, ultimately sold their house and moved out of town, in part due to the difficulties presented by their Variance case. At the final City Council meeting at which their case was considered, their counsel stated that the controversy surrounding their residential addition took three years to resolve.

¹⁴According to NUC's research, City Manager Weldon Rucker submitted a report accompanying the proposed amendment precipitated by the 2323 Glen Avenue case on March 28, 2003. NUC, Ordinance History at 21. The City Manager's report "stated that 'the City Attorney has explained that the current ordinance does not allow sufficient flexibility to permit a Variance' and that 'several Council members have expressed concern that the ordinance is too restrictive.'" *Id.* The purpose of the proposed amendment was to provide the flexibility to allow the construction of additions to affected properties without having to obtain a Variance while 'still maintaining the goal of creek preservation and future daylighting. This...was to be accomplished by providing

4. 2001-2002: Amended Definition of “Creek” and Change to The General Plan

The administrative interpretations of the Creeks Ordinance rendered by the City Attorney on December 5, 1991 and December 1, 2000 were never tested in court. Although some interested parties have questioned the correctness of those opinions in retrospect,¹⁵ evaluating whether they were right or not from today’s vantage point seems pointless because, ultimately, their practical significance was simply to set the stage for legislative amendments that ratified the City Attorney’s interpretive stance.

In early 2001, as a result of the issues concerning inaccurate maps that arose in the 137 Bret Harte Road case, acting City Manager Rucker, supported by Planning Department staff,

for an exemption from the...[setback requirement] if... [nine] specific findings could be made.” *Id See* BMC 17.08.060 (B) (1)-(9). Whether the 2323 Glen amendment in fact introduced greater “flexibility” is probably debatable. All nine findings must be made; the specified criteria were guaranteed to be met for 2323 Glen Avenue because that is the case they were designed to resolve, but several of them appear to be highly idiosyncratic (*e.g.* the culvert must bisect the area of the residence sitting on top of it so that 30% of the residence is on either side of the culvert, see BMC 17.08.050 (B)(2)). In any event, wholly apart from the whether the nine special findings required for a Used Permit might ever again met in any case after 2323 Glen, the *procedural burdens* remain for obtaining a Use Permit are still very burdensome. A Use Permit still requires proceedings before the ZAB or the City Council, with attendant expense and delay. *See* footnotes 3-4 above. And as a practical matter, any applicant going through permit process that requires an open hearing step – as opposed to a simple administrative, staff-level decision – may, and in this setting likely will, encounter organized opposition, just as the owners of 2323 Glen Avenue did.

¹⁵NUC has pointed out that, as conceded in the presentation by Deputy City Attorney Laura McKinney to the CTF on June 27, 2005, the City Attorney’s office failed to check the legislative history of the Creeks Ordinance when it opined that culverts are covered by the Ordinance. There is, to be sure, no need to check legislative history where the language of an ordinance is clear on its face, since the words of the ordinance evidence its intent. Indeed, that is the principle cited by the City Attorney’s office in her December 5, 1991 referring to the “plain language” of the Ordinance. If there is a problem with the opinion, it is that the reasoning is a bit glib and never genuinely grapples with the original language of the Ordinance. For example, the City Attorney concludes that a culvert constitutes a “Creek” and is therefore subject to the setback requirements of 17.08.050 because the definition does not distinguish between above ground and below ground creeks, but she never mentions the opening words of the “Creek” definition. As adopted in 1990, the definition began with the words “[c]reek means a naturally occurring swale or depression... which carries water...” Unless the only fair reading of this language is that water running through a culvert is carried in a “*naturally occurring* swale or depression” – in fact, the language seems to suggest just the opposite because a culvert is an engineered structure -- the inclusion of culverts in the definition of “Creek” does not seem all that plain.

proposed certain changes to the language of the original definition of the term “Creek” to make clear that creeks shown on the maps that were specifically mentioned in that definition were not the exclusive basis for determining what was regulated under the Ordinance.¹⁶ There followed a series of City Council meetings over the next two years at which the issue of how to address the “Creek” definition came before the Council.¹⁷ Eventually, at its meeting on November 12, 2002, the Council adopted amendatory language, significantly changing the wording of the original definition.¹⁸

Notably, the amended definition addressed not just the mapping issue, but also the issue of culverts. The issue of culverts came up almost as an aside. The initial version of Mr. Rucker’s proposed amended definition referred simply to “above ground creeks,” but in a memo to the City Council on April 23, 2002 summarizing certain discussions with creeks activists that had occurred since January 16, 2001 when he originally proposed a new “Creek” definition, Mr. Rucker stated that “another issue was raised during these discussions regarding the fact that the ordinance had long been interpreted to apply to culverted creeks and, therefore, the language referring to ‘above ground creeks’ was inaccurate. New language was proposed to include creeks ‘*whether culverted or not.*’”¹⁹

In the amended version of the “Creek” definition, the new phrase “whether culverted or not” was added and a phrase in the original definition stating that regulated creeks had to be “naturally occurring” was deleted, thus making clear, explicitly and unequivocally – for the first

¹⁶McKinney Ordinance Background Memo at 2; *see also* NUC, Ordinance History at 10.

¹⁷McKinney Ordinance Background Memo at 2, Attachment F (Memorandum dated April 23, 2002 from Weldon Rucker, City Manager, to the City Council re Amendment To Creeks Ordinance Definition of “Creek” And Adding A Provision To Allow For The Establishment Of Fees For The Administration Of The Chapter), Attachment G (Memorandum dated October 22, 2002 from Weldon Rucker, City Manager, to the City Council re Amendment To Creeks Ordinance Definition of “Creek” And Adding A Provision To Allow For The Establishment Of Fees For The Administration Of The Chapter); *see also* NUC Ordinance History at 11-17.

¹⁸McKinney Ordinance Background Memo at 2.

¹⁹McKinney Ordinance Background Memo Attachment F at 2 (emphasis added).

time -- that culverts were included. Since the amendment codified the City Attorney's interpretative opinions of December 5, 1991 (culverts are covered) and December 1, 2000 (creeks not listed on maps referenced in the Ordinance may be covered), Mr. Rucker advised the City Council the amended definition of "Creek" was intended to be "declaratory of existing law."²⁰

Besides amending the "Creek" definition, the City Council took another step in 2002 that is relevant not only to the issue of culverts, but also to the broader policy behind the Ordinance. On April 29, 2002, the Council passed Resolution No. 61,533-N.S. adding a new section on "Creeks and Watershed Management" to the City's General Plan.²¹ That section articulates the City's policy and implementation plan for daylighting and overall watershed management. *See* Berkeley General Plan, Environmental Management Element, Policy EM-27 ("Policy EM-27"). Policy EM-27 states that the City will "[w]henever feasible, daylight creeks by removing culverts, underground pipes, and obstructions to fish and animal migrations." *Id.* As one of nine steps for implementation, Policy EM-27 adopts the following "Action":

"Restrict development on or adjacent to open creeks. *When creeks are culverted, restrict construction over creeks and encourage designs that respect or emphasize the existence of the creeks under the site.*"

See Policy EM-27, Action D (emphasis added).²² Accordingly, while it may have been an

²⁰McKinney Ordinance Background Memo, Attachment G, at 3. Whether it was fair to say that the inclusion of culvert in the Ordinance was merely "declaratory of existing law" is a debateable point. While a City Attorney's opinion interpreting an ordinance is often considered by courts in determining legislative intent, *see Evans v. City of Berkeley*, 38 Cal. 4th 1 at 12 n. 5 (2006), and generally is given great weight, *see DeYoung v. City of San Diego*, 147 Cal. App. 3d 11, 18 (1983), it is not the case that such an opinion -- by itself -- has the force of law. Moreover, the amendment did more than simply confirm something implicit in the original wording. It actually deleted language ("naturally occurring") that suggested culverts were *not* covered.

²¹*Id.* at 14-15.

²²*See also id.*, Action H (consider amending the Ordinance to restrict parking and driveways on top of culverts and within 30 feet of creeks) and Action I (consider replacing culverts under roadways with open bridging wherever feasible") These are three of nine separate Actions adopted in the City's General Plan as part of EM-27. The remaining Actions state that (A) the City will seek "funding sources" for daylighting projects; (B) establish pedestrian and bicycle

overstatement to say, as Mr. Rucker did when he advised the City Council that the express inclusion culverts in the Ordinance was merely “declaratory of existing law,” there is no question that, by December 2002, when the amended definition took effect, the City had adopted a specific policy -- embodied in Policy EM-27 of the General Plan -- that contemplates the regulation of both culverts and creeks as part of its more general policy on “Creeks and Watershed Management.”

5. 2003-2005: The 2323 Glen Avenue Case, The Creeks Workshop, Notification of “Potentially Affected” Property Owners

The inclusion of culverts in the Ordinance had a direct impact on the 2323 Glen Avenue case because the issue there was the application of the full 30-foot setback, without any flexibility – because of the strict criteria for a Variance – to a culvert, not an open creek. Because it was such a hotly contested case, 2323 Glen Avenue spurred wide-ranging discussion on the City Council about the Ordinance in general. Questions were raised about whether the Ordinance is too inflexible.²³ Questions were raised about whether the recent change to the “Creek” definition was “not merely a clarification but instead was major change in the intent of the Ordinance.”²⁴ Questions were raised about whether the process that was used to develop the amended “Creek” definition had been sufficiently transparent to the public and had afforded sufficient public input.²⁵

paths along creek “greenways” to connect neighborhoods and urban areas; (C) encourage daylighting not only on public land but also “along creeks that are substantially open and accessible to the public”; (E) work in cooperation with neighboring jurisdictions to jointly undertake wetlands and creek restoration projects; (F) ensure that daylighting proposals include appropriate landscaping, allow for adequate access, and carefully consider the urban context and the “economic impact on nearby properties”; (G) regulate “any new development” within 30 feet of an exposed creekbed, and require a careful review of “any new development or improvement project proposed in water sensitive areas” Virtually all of these additions to the General Plan go beyond the literal scope of the Ordinance and suggest a recommitment by the City Council, as of April 2002, to the broadest purposes outlined in the recitals of the Ordinance.

²³NUC, Ordinance History at 21.

²⁴*Id.* at 20.

²⁵*Id.* at 20.

These policy questions led to a suggestion by Mayor Tom Bates that the City Council hold a public Workshop on creeks regulation.²⁶ The Workshop took place on March 16, 2004,²⁷ at a time that roughly coincided with stepped up enforcement of the Ordinance by the Planning Department based on a new, improved map that showed Berkeley's creek network in greater detail than had been possible previously. At the Workshop, Planning Director Marks commented on the availability of a new map that had been developed by the City's Department of Information Technology using newly available satellite imagery.²⁸ Director Marks pointed out that the City's improved ability to determine the exact locations of creeks and culverts would facilitate stronger enforcement of the Ordinance.²⁹

A few months later, on September 1, 2004, City Manager Phil Kamlarz sent a letter to more than 2,000 property owners whose properties appeared on the new map as being "potentially affected" by the Ordinance because structures on their property had been identified as being within 40 feet of a creek centerline.³⁰ This letter to potentially affected property owners led to a attended, highly contentious public hearing on September 28, 2004.³¹ During this public hearing, there was a great deal of focus on the issue of whether the Ordinance would be an impediment to rebuilding destroyed homes following a major disaster or any other type of loss.

The City Council responded immediately to that concern, passing an amendment to the Ordinance, effective November 4, 2004 making clear that rebuilding following a loss will be allowed so long as "the replacement structure is reasonably similar in use, dimensions, floor area, square footage, lot coverage and footprint to the destroyed structure and complies with all

²⁶*Id.* at 20.

²⁷NUC, Ordinance History at 24.

²⁸*Id.* at 24.

²⁹*Id.* at 24.

³⁰Letter dated September 1, 2004 from City Manager Phil Kamlarz to Property Owners and Other Interested Parties, attached as Item 11 to the materials for the February 28, 2005 CTF Meeting.

³¹NUC, Ordinance History at 28-29.

currently applicable building codes.” BMC 17.08.055 (B). In the case of parcels with culverts running under them, there is the additional requirement that the owner obtain an engineering evaluation showing, in essence, no increased bearing load on the culvert. BMC 17.08.055 (C). After enacting this amendment concerning rebuilding, the City Council established a process to examine in depth the issues raised at the public meeting on September 28. As the vehicle for that examination, the City Council created the CTF.³²

While the work of the CTF has been underway in 2005, the City has continued to develop and refine its policies for administration of the Ordinance. In June 2005, Planning Department and the Public Works Department adopted an Inter- Departmental Policy Memorandum (the “June 2005 Inter-Departmental Policy Memorandum”) establishing a process for identifying the location of creeks and culverts.³³ Generally, the June 2005 Inter-Departmental Policy Memorandum; requires owners to pay a “creek identification” fee to the City; and requires at least a site visit and a review by the Public Works Department, and in some cases requires the preparation by the property owner of a topographic map as well. The June 2005 Inter-Departmental Policy Memorandum puts the burden on property owners to show that their creeks or culverts are *not* within the protected setback area shown on the City’s Creek Map, thus placing the risk that the Creek Map might be erroneous might be wrong on the property holder.

One final action by the City Council in 2005 is pertinent. On its July 25, 2005, Action calendar, the Council adopted a Resolution addressing setbacks applicable to culverts. This Resolution was proposed by City Manager Kamlarz in connection with the David Brower/Oxford Plaza development project. The City Manager’s memo supporting the resolution explains that some solar panels and street awnings encroach into the required setback adjacent to a culvert which runs along Allston Way. The memo explains that,

Under the City’s current practice, these elements would not be considered subject to the

³²Resolution 62,711-A, adopted November 9, 2005.

³³Procedure for Processing Permit Applications Where a Creek May Be Present on the Property, adopted jointly by the Planning Department and the Public Works Department on June 29, 2004.

setback requirements because they are not part of the building's roof or enclosed within exterior walls or columns that support the roof, and under the Creeks Ordinance the setback requirement applies only to "structures[s] having a roof supported by columns or walls." However, since the matter is not entirely unambiguous, staff requests that the Council specifically express its legislative intent on this matter...

Based on this request, the Council adopted a resolution "expressing the legislative intent that uncovered decks, porches, awnings, solar equipment and similar features are not subject to the required setback for culverted creeks under the Creeks Ordinance."

6. Surrounding Legal Context: Applicable State and Federal Laws, Takings Doctrine

Applicable State and Federal Laws. If we had no municipal regulation of creeks in Berkeley, our creeks would still be regulated – just not under local law. The Ordinance is simply a form of local environmental regulation that must be understood in the broader context of state and federal regulation governing waterchannels in our community. The primary sources of state and federal regulation over waterchannels in Berkeley include, at the federal level, the Clean Water Act³⁴ and the federal Endangered Species Act,³⁵ and at the state level, the Porter Cologne

³⁴33 U.S.C. § 1251 et seq. The Clean Water Act established nationally applicable "effluent" limitations for the "navigable waters of the United States," which are restrictions on the quantities, rates and concentrations of chemical, physical and other biological constituents. States are allowed to set their own effluent limitations, so long as those limitations are no less stringent than federal standards. *See City of Burbank v. State Water Resources Control Board*, 35 Cal. 4th 613 (2005) (setting forth the complex interlocking requirements of state and federal water regulation). The primary means for doing this is the National Pollutant Discharge Elimination System ("NPDES"). California has a federally-approved scheme of water regulation that is administered by nine regional water quality control boards established under the Porter Cologne Water Quality Act. "Each of the nine boards has a master policy document that describes the technical...and programmatic foundation used for protecting water quality. In the Bay Area, this Water Quality Control Plan, or 'Basin Plan,' details beneficial uses that are directly related to the concern of the physical integrity of stream and river channels." Local Government Riparian Buffers in the San Francisco Bay Area (July 2004), at 8, attached as Item 13 to the materials for the February 28, 2005 CTF Meeting [cited below "RWQCB, Local Government Riparian Buffers in the San Francisco Bay Area"]. The regional boards are responsible for enforcing NPDES standards locally. *See Waterkeepers Northern California v. State Water Resources Control Board*, 102 Cal. App. 4th 1448 (2002) (describing state-level administration of federal NPDES standards through regional water quality boards). The City of Berkeley is required to meet effluent limitations imposed by its NPDES permit.

³⁵16 U.S.C. § 1531.

Water Quality Control Act³⁶ and the California Environmental Quality Act.³⁷

Of particular relevance is state level regulation under the Porter Cologne Act by the Regional Water Quality Control Board (“RWQCB”). One of the first presenters to the CTF was Ann Riley, the Watershed and River Restoration Advisor to the RWQCB in San Francisco. Ms. Riley advised the CTF that, while state and federal authorities generally do not have jurisdiction over local land-use regulation,³⁸ “non-point source” pollution – i.e. pollution coming from urban run-off into drainage systems -- is increasingly recognized as a major source of water contamination, and thus is coming under tighter and tighter scrutiny.

Takings Doctrine. Some critics of creeks regulation in Berkeley have charges that the Ordinance constitutes at “taking” of private property. While that kind of rhetoric has a certain drama, the reality, according to the legal presentation to the CTF,³⁹ is that there is no legal substance to it. Cities have broad leeway to regulate land-use, as illustrated by the United States Supreme Court’s recent decision in *Kelo v. City of New London*, 125 S.Ct. 2655 (2005). Viable takings claims are generally limited to physical occupation or seizure of ownership.

Attempts to establish so-called regulatory “takings” based on imposition of stringent land-use regulation, and the diminution of value that results from it – an issue that received a great deal of focus in the public hearings –have consistently been rejected by the United States Supreme Court and by the California Supreme Court over the last thirty years.⁴⁰ With respect to setbacks in particular, there are numerous examples of cases in which setbacks have been upheld

³⁶Water Code, § 13000 et seq.

³⁷Public Resources Code, § 21000 et seq.

³⁸Construction bridges is one notable exception. For the construction of bridges, a permit must be obtained from the Army Corps of Engineers under Section 404 of the CWA.

³⁹CTF Meeting, May 16, 2005, Presentation of Ellison Folk and Carmen Borg of Shute, Mihaly & Weinberger.

⁴⁰*See Dolan v. City of Tigard*, 114 S. Ct. 2309 (1994); *Lucas v. South Carolina Coastal Council*, 112 S.Ct. 2886 (1992); *Griffin Development v. City of Oxnard*, 39 Cal. 3d 256 (1985); *Ehrlich v. City of Culver City*, 12 Cal. 4th 854 (1996).

in the face of takings challenges.⁴¹ Thus, while there may be legitimate bases to criticize the Ordinance as a matter of *policy*, the prospect that the Ordinance might somehow be vulnerable to *legal* challenge as a taking of private property is not one of them.

III. CREEKS AND CULVERTS IN BERKELEY

Seven major watersheds having defined open creeks and culverts appear on the City’s current creeks map. Those watersheds are Cerritos, Cordornices, Derby/Potter, Marin, Schoolhouse, Strawberry, and Temescal.⁴² Within this watershed network, there are 39,859 feet of open creeks and 35,163 feet of culverts.⁴³ The culverts are interspersed throughout the system of open creeks, appearing in segments connected to the open creeks; the culvert segments are also connected at various points to the City’s system of engineered storm drains, thus, in effect, making the entire network of open creeks, culverts and storm drains a single water drainage system.

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⁴¹See *e.g. Dolan v. City of Tigard*, 114 S.Ct. 2309; *Big Creek Lumber v. San Mateo County*, 31 Cal. App. 4th 418 (1995).

⁴²See Map entitled “City of Berkeley 17.08 Creeks and Parcels with Setback Effects from those Creeks” (Version of 8 April 2005), available at the home page for the City’s GIS Department, <http://www.ci.berkeley.ca.us/gis/maproom.htm>.

⁴³See Memorandum from City Manager Phil Kamlarz to the Mayor and City Council, “Creeks and Culvert Information” (July 13, 2004) (“Kamlarz Creeks & Culverts Background Memo”) at 1, attached as Item 8 to materials for CTF Meeting of February 7, 2005.

While the vast majority of the open creeks are on private property, the culverts are about evenly distributed between private property and public property. Below is a more specific breakdown by watershed:

Watershed	Culverts				Open Channels		
	Total Length (Ft.)	Street Crossing (Ft.)	Public Property (Ft.)	Private Property (Ft.)	Total Length (Ft.)	Public Property (Ft.)	Private Property (Ft.)
Cerritos	3,457	596	0	2,861	4,767	118	4,649
Cordornices	9,735	4,577	1,449	3,709	13,825	2,488	11,337
Derby/Potter	3,510	964	234	2,312	1,369	0	1,369
Marin	4,576	3,421	0	1,155	6,191	356	5,835
Schoolhouse	2,270	640	451	1,179	1,646	0	1,646
Strawberry	10,030	3,937	1,076	5,017	7,519	125	7,394
Temescal	1,585	423	0	1,162	4,542	0	4,542
Totals	35,163	14,558	3,210	17,395	39,859	3,087	36,772

Kamlarz Culverts and Creeks Background Memo at page 2, Table A.

Between 1900 and 1920, the City built most of the culverts that pass under the streets and on public property.⁴⁴ Most culverts on private property are of roughly the same vintage and were built by private property owners.⁴⁵ Very little is known about the exact origin of culverts on private property, since the City did not start its permitting process for private property culverts until December 1928.⁴⁶ Due to the advanced age of these culverts, both public and private, many are in a state of deterioration and disrepair. An extensive study would have to be done to determine the full extent of the problem, but we do know that culverts in Berkeley “are nearing the end of their useful life of between 60-80 years,” and, “as the...culverts age beyond their useful life, failures will start to be experienced causing damage to the public right-of-way or to private property.”⁴⁷

⁴⁴Kamlarz Culverts and Creeks Background Memo at 1.

⁴⁵*Id.*

⁴⁶*Id.*

⁴⁷*Id.* Using Strawberry Creek as a test study, the City Engineer has documented six areas of concern due to apparent risks of culvert failure. *Id.* at 2. The repair costs estimated just for these

Culvert repair can be carried out by open trench or by liner.⁴⁸ The open trench method is generally less expensive, but requires access from above.⁴⁹ Where there are structures impeding access, the only choice is to carry out repairs using liners.⁵⁰ In addition to increasing expense, the use of liners reduces the capacity of culverts and thus adds to the overall load of the City's stormwater drainage system.⁵¹ The City Engineer has estimated the cost of culvert repair to be \$5,000 to \$7,000 per linear foot.⁵²

IV. FIELD DATA AND SCIENCE SUPPORTING SETBACKS

A. The Work Commissioned From Balance Hydrologics

The CTF commissioned field survey work by hydrological engineering firm, Balance Hydrologics. The City sent out a notice to twelve-hundred property owners requesting that it be given access to parcels adjacent to creeks and culverts, and then conducting site visits at a sample of 320 sites for which access was granted.⁵³ In addition, Balance gathered data on

six areas of identified concern exceed \$15,000,000. *Id.*

⁴⁸*See* Memorandum dated August 15, 2005 from Lorin Jensen to CTF responding to queries from re culvert condition and repair, at 3, Response No. 10, attached at Item 2 to materials for CTF Meeting on August 15, 2005.

⁴⁹*Id.*

⁵⁰*Id.*

⁵¹*Id.*

⁵²Kamlarz Culverts and Creeks Background Memo at 3. Although the CTF recommends that the City do everything it can to look for sources of funding for a variety of watershed management costs, including culvert repair, nothing in this Report is intended to address one way or the other who is legally responsible for the repair and maintenance of culverts on private property. That issue is currently in litigation and is beyond was expressly placed beyond the CTF's purview by the City Council.

⁵³Presentation by Shawn Chartrand, Jim Robins and Stacey Porter of Balance Hydrologics, at the CTF's January 9, 2006 meeting. A Power Point summary of this presentation is available at <http://www.cityofberkeley.info/planning/landuse/Creeks/2006/EPackets/20060109/20060109BHFieldResults.ppt>. *See also* Letter dated March 14, 2005 from Jim Robins of Balance Hydrologics to Wendy Cosin, Deputy Planning Director, "Summary of Data and Conclusions: Possible Revision of City of Berkeley Setback Ordinance," attached as Item 7 to the materials for the March 20, 2006 CTF Meeting.

culverts by mapping culvert locations using GIS data and overlaying those locations on satellite photographs.⁵⁴

For the open creeks, Balance collected a variety of data at each site based on a rapid assessment of creek channel characteristic (such as top-of-bank width, depth, bank slope, setback characteristics, bed and bank substrates, percentage of bank vegetation, and bank erosion); setback characteristics (such as distance from center of the creek to near roofed structures, patio, decks, and impermeable surfaces); and ecological characteristics (such as canopy cover, woodland habitat, and extent and diversity of fish and animal life).⁵⁵

Balance found the 67% of primary roofed structures on the sampled sites do not conform to the required 30-foot from creek centerline setback in the Ordinance.⁵⁶ The number of patios, decks and impervious surfaces within thirty feet of a creek was even higher (84%, 76% and 96%, respectively).⁵⁷ Balance also reported that 35% of “culvertside” landowners have between 40%-100% of their parcel area within the 30-foot setback; that 48% of “culvertside” landowners have some structure within 30 feet of the culvert; and the 37 % of “culvertside” landowners have a structure within 15 feet of the culvert.⁵⁸

In addition to conducting a field survey, Balance Hydrologics provided a review of the available scientific literature on creek setbacks.⁵⁹ Balance prefaced its literature review with an explanation of the between “buffers” and “setbacks.” A “buffer” is a riparian zone or corridor in which there is a rich diversity of natural plant, animal and fish life.⁶⁰ A “setback,” on the other

⁵⁴*Id.*

⁵⁵*Id.*

⁵⁶*Id.*

⁵⁷*Id.*

⁵⁸*Id.*

⁵⁹Memorandum dated January 9, 2006 from Jim Robins and Roger Leventhal to CTF, attached as Item 4 Supplemental to the materials for the January 9, 2006 CTF Meeting; *see also* Item 10 to the materials for the April 17, 2006 CTF Meeting (revision of January 9, 2006 Memo).

⁶⁰*Id.* at 1 (Scientific Context).

hand,” is simply the regulatory tool by which a “buffer” is created and promoted over time.⁶¹

According to Balance, the scientific literature documenting the significance of creek buffers goes back to the 1950s. The earliest writings focus on the value of buffers as filtration systems (i.e. in reducing deposition of sediments into creeks).⁶² Later writings tend to focus not only on filtration, but on a variety of other functions in a riparian system (increased animal and fish habitat, promoting plant diversity, improving water quality),⁶³ and on the physical health of the creek geomorphology (improving stream meander and guarding against bank erosion).⁶⁴

B. Riparian Buffer Science As A Basis For Regulatory Policy

Given the conditions we face in our community, with an extensive network of creeks and culverts running from the hills to the Bay, and given the hazards presented -- in terms of pollution, flooding, and physical collapse of or other damage to structures -- we have found that there is an adequate scientific basis for land-use regulation in Berkeley that promotes healthy riparian corridors near creeks and culverts. Numerous presenters to the CTF explained the science.⁶⁵ The science justifying riparian buffers is well-established. This is not an area in

⁶¹*Id.*

⁶²*Id.* at 2 (Filtration: Sediments, Nutrients and Fecal Coliform Removal).

⁶³*Id.* at 2-4 (Moderation of Water Temperature and Microclimate, Salmonid Habitat, Terrestrial Habitats [Reptiles, Amphibians, Birds and Mammals]).

⁶⁴*Id.* at 3 (Channel Complexity). For purposes of general guidance to CTF in fashioning recommended regulation, Balance emphasized that, in selecting an appropriate setback distance, it is always important to keep in mind the specific purposes sought to be achieved. *Id.* at 6 (Linking Science and Policy). For example, the literature shows that, as slope increases, wider setbacks are needed for purposes of filtration of sediment and promoting water quality, while as slope decreases, wider setbacks are needed for purposes of habitat protection. *Id.*

⁶⁵Presentation of Ann Riley, Watershed and River Restoration Advisor to the San Francisco Bay Region RWQCB, at the May 2, 2005 meeting; Presentation of Dr. Don Erman, Professor of Stream Ecology at U.C. Berkeley and U.C. Davis, at the July 18, 2005 CTF Meeting; Presentation of Lesley Estes, Watershed Program Supervisor, City of Oakland, at the June 6, 2005 CTF Meeting; Presentation of Dr. Juliet Lamont, on behalf of the Urban Creeks Council, the Live Oak Cordornices Creek Neighborhood Association, the Strawberry Creek Lodge Restoration Project, and Citizens for Strawberry Creek Plaza, at the September 19, 2005 CTF Meeting; Presentation of Josh Bradt, on behalf of the Urban Creeks Council, at the October 17,

which there is controversy or dispute among scientists, or in which policy-makers have been reluctant to accept the science as a basis for regulation.

To the contrary, one of the best statements of the scientific basis for regulating creeks and culverts appears in a survey published by the San Francisco RWQCB, the regulatory entity with overall authority to administer water quality standards that Berkeley must meet under its NPDES permit. In a recent publication, the San Francisco RWQCB explains why it actively encourages local governments to adopt riparian buffer protection ordinances at local level, as follows:

Riparian zones perform many ecological functions important to enhancing water quality, water quantity, biodiversity, habitat complexity, and flood capacity. The stream channel itself conveys runoff, supports aquatic plants and animals, provides groundwater recharge, and supplies water to trees and plants that typically thrive in a riparian zone.

Stream buffers are an effective way to physically protect and separate a stream or wetland from future disturbance or encroachment. A network of stream buffers serves as a right-of-way during floods and sustains the integrity of stream ecosystems and habitat....Riparian forest and wetland buffers, if properly maintained, appear to have a significant capacity to mitigate some of the effects of development. Riparian buffers protect stream function, protect habitat, and provide additional capacity for flood flow conveyance.

RWQCB, Local Government Riparian Buffers in the San Francisco Bay Area, at 4. *See also* San Francisco RWQCB Technical Circular W-D 02 - #1 (April 2003), "A Primer on Stream and River Protection for the Regulator and Program Manager," attached as part of late-received materials for the May 2, 2005 CTF Meeting, and discussed by Ann Riley during her presentation at that meeting.

V. CREEKS REGULATION IN OTHER COMMUNITIES

We have reviewed creeks ordinances or proposed ordinances from the following nine different counties or municipalities; the City of Oakland, the County of Napa, the County of Santa Clara, the City of Santa Cruz, the City of Santa Barbara, the City of San Luis Obispo, Redwood City, the City of Mill Valley, and the City of Orinda. We received presentations from planners or consultants who were involved in the development of four of these ordinances

2005 CTF Meeting.

(Oakland, Orinda, Napa, and Santa Barbara).

Four aspects of our review of other creeks legislation in other communities stand out. *First*, all of the ordinances we reviewed use setbacks as the primary tool of creeks regulation. Within the group of nine, there are many different approaches to establishing setbacks, varying from a unitary distance measured from either the creek centerline or the top of the bank, to complex formulas based on the slope, depth of channel, or other geomorphic features of the water channel. There is also wide variation in the setback distance, with some running to 100 feet or more (generally in rural conditions) and many others clustered at various distances less than 100 feet (in more urban areas). The minimum setback distance we saw was thirty feet.⁶⁶ Some of the ordinances base setback distances on empirical data collected about specific creeks conditions, generally after several years of data collection, but in at two notable cases, the empirical data led policymakers to propose -- unsuccessfully -- wider setbacks than were feasible in their communities.⁶⁷

Second, in some of the ordinances there are different setback distances for different zones or creek classifications, with zones or classifications defined by differences in the geomorphic features of the zonal area or the classified creek. These zonal or creek classification schemes tend to be quite complex. They are also expensive to develop since they require a great deal of

⁶⁶Thirty-three feet is also the minimum setback distance that is recommended by the RWQCB. *See* RWQCB, *Local Government Riparian Buffers in the San Francisco Bay Area*, at 17. In response to questions from the CTF, our consultant, Balance Hydrologics, observed that it is fair to say that approximately thirty-feet from creek center-line is a minimum threshold for an effective setback distance. Statement of Jim Robins, at January 9, 2006 CTF Meeting during presentation of Balance's findings. *See also* Letter dated March 14, 2005 from Jim Robins of Balance Hydrologics to Wendy Cosin, Deputy Planning Director, "Summary of Data and Conclusions: Possible Revision of City of Berkeley Setback Ordinance," attached as Item 7 to the materials for the March 20, 2006 CTF Meeting (in light of conditions in Berkeley, "if we could, we would suggest a setback policy more rigorous than the one that is in place.").

⁶⁷This is consistent with the report on the available scientific literature that we received from Balance Hydrologics. The available science generally supports far wider setbacks than are feasible in any given community. Thus, while there is a solid scientific basis for using setbacks as a policy tool to create and foster riparian buffer zones, specific setback distances tend to be set as a matter of expedience, rather than on any scientific basis.

empirical data collection, an approach that can turn out to be useless and wasteful if the resulting setback scheme is not politically palatable. Further complicating any attempt to generalize from the zonal or creek classification scheme we reviewed is that fact, with the possible exception Oakland – a notable case where a zonal scheme has been unsuccessful and is under revision-- the mix of topographical, demographic and land-use densities in these other communities is very different from conditions in Berkeley. Perhaps most significantly, we asked our consultant, Balance Hydrologics, to comment on whether a zonal or creek classification systems for establishing setbacks might be workable in Berkeley, and Balance reported back that there are so many geomorphic variations in local creek conditions that no such scheme appears to be feasible, without significant expense for further field work and probably unworkable regulatory complexity.

Third, no municipality or county of which we are aware expressly regulates culverts (*i.e.* a watercourses flowing through an engineered channel, fully or partially enclosed, either above or below ground). That is, none of the ordinances we reviewed *explicitly* includes culverts within the scope of setback regulation, along with open creeks. Of course, Berkeley did not explicitly include culverts in the original scope of its Ordinance either, and we cannot say whether the scale and magnitude of Berkeley’s problems with deteriorating culverts; with the attendant pollution and health and safety hazards, exists elsewhere. What we can say, however, is that local creeks regulation in other parts of the state appears to have been directed exclusively to naturally occurring, open creeks.

Fourth, we saw a pattern in most of the communities we surveyed of complex, empirically-based schemes of creeks regulation being initially proposed, meeting intense public resistance from property owners, and then undergoing revisions designed for simplification and to moderate the regulatory impact on property owners. This occurred in Napa County, for example, where voters rejected by a 2-to-1 margin a creeks ordinance that had been developed over the course of five years of field work. It also occurred in Santa Barbara, which “conducted an expensive effort...over many years,” including detailed mapping of each creek. Planning

staff from Santa Barbara reports that, after “hellish public meetings,” the initial proposal “went down in flames.” The proposed creeks regulations in Santa Barbara is currently being revised with a view to minimizing impact on single family homes. Oakland and Santa Clara adopted creeks ordinances without extensive public vetting, and they are now retooling their regulatory approach in the face of public complaints. These examples confirm what is manifestly obvious from our own experience here in Berkeley: Because the process of developing creeks regulation is often volatile and hotly contested, maximizing public involvement during the policy-making process in order to gain community “buy-in” is key.

VI. COMPETING POLICY VALUES WEIGHED BY THE CTF

Certain themes emerged repeatedly in the presentations given to the CTF and the discussions among CTF members. In a broad sense, these themes highlight the competing policy values that were weighed by the CTF in formulating its recommendations. Below, we set forth a general summary of those competing policy values in order to provide some context for our recommendations. In the end, we sought to strike a balance between these differing perspectives.

A. The Case For Preserving And Strengthening Creeks Regulation In Berkeley

The enactment of the Creeks Ordinance in 1989 was a pioneering step toward creating an integrated watershed management policy in our community. We should strengthen the Ordinance, not undermine it. Creeks are part of the overall network of water runoff from the hills to the bay and should be regulated in a manner that promotes water quality, public safety, and preservation of our natural environment. The water channels we are concerned with run the gamut from large, open creek corridors, to seasonal creeks that are dry much of the year, to engineered culverts and storm drains. All of these drainage systems are interconnected. They form a single, interconnected system that supports a complex ecology of flora and fauna and affects all citizens of the community, not just creekside property owners within the immediately

proximity of creeks.

We should promote and encourage creekside riparian buffer zones in which there is a rich diversity of natural plant and animal life. Healthy creek buffer zones provide a “green infrastructure” that, in effect, serves as backup drainage system for the City, that helps with flood control, and that functions as a natural stormwater toxics filtration system, all at low cost to the community. The expense to the public of achieving the same increase in drainage system capacity, better flood control, and toxics mitigation would be many times what it will “cost” to tighten our regulation of creeks. Moreover, good public policy in this area cannot be administered on a piecemeal basis; overall watershed management is critical because of the complexity and interconnectedness of the drainage system as a whole. Small, incremental impacts on upstream flow conditions -- especially in headwater areas, when water flows may be intermittent and difficult to discern -- can have major impacts downstream. Whatever finds its way into the water upstream, perhaps pesticides or other toxins emanating from streets, driveways or lawn fertilizers, or perhaps debris from deteriorating structures or litter, will eventually flow downhill and create pollution, not only at the source but downstream.

Culverts provide a good illustration of the interconnectedness of the drainage system as a whole. Just as a road does not become something other than a road when it passes through a tunnel, so a creek does not become something other than a creek when it passes through a culvert. Because culverts are connected at various points to the engineered storm drain systems, the flow of water through culverts adds to the load on the City’s storm drain system. In addition, the narrow channels created by culverts tend to increase the velocity of water flows throughout the drainage system, particularly in the hills, where water flow builds in velocity due to the slope.⁶⁸ During major storm events – as we saw on December 18, 2005 in West Berkeley – the

⁶⁸Fast moving water creates inhospitable conditions for plant and animal life. According to the CTF’s consultant, Balance Hydrologics, field observation of Berkeley’s creeks shows a striking absence of biological life in Berkeley’s creek corridors. Balance reported that a likely explanation for this “dead zone” phenomenon is the sheer velocity of the water flows in the creeks. See Letter dated March 14, 2005 from Jim Robins of Balance Hydrologics to Wendy

stormwater drainage system is often strained beyond capacity, causing widespread flooding. For those who live in the flat lands, this is a major problem, and it is a problem caused largely by forces far upstream from the flood zone.

Not only will a policy approach to creeks and culverts that deals with them as part of a single scheme of watershed regulation help to address in the most effective way community-wide problems such as flooding and pollution, it will also foster and promote a natural environment that all citizens can enjoy. The promotion of daylighting – a stated objective of the Creeks Ordinance -- provides an excellent example. Daylighting transforms buried culverts into riparian zones that support fish, birds, and plant life in the urban environment. Berkeley should not abandon the pioneering role it has had in encouraging daylighting. We should reaffirm the stated commitment to daylighting the original Ordinance, and go a step further. Through a transparent process that allows plenty of public participation, a list of criteria to identify potential daylighting projects should be established. We should make clear that daylighting on private property will always be voluntary, but in order to promote and encourage private property owners to undertake daylighting we should include public as well as private property on this list. Although priority should be placed on daylighting culverts located on public property, daylighting opportunities sometimes arise on private property as well. If private property owners are not made aware that daylighting is a possibility – and more importantly, that grants and other public resources may be available to carry it out – many opportunities to daylight culverts will be missed.

Finally, regulating creeks and culverts as part of an overall watershed management approach to drainage systems is not only good public policy locally, it will also facilitate Berkeley's compliance with environmental standards under state and federal law. Over the last 40 years, federal and state environmental laws have become increasingly stringent in many areas,

Cosin, Deputy Planning Director, "Summary of Data and Conclusions: Possible Revision of City of Berkeley Setback Ordinance," attached as Item 7 to the materials for the March 20, 2006 CTF Meeting.

most particularity in the areas of water quality, but also with regard to air quality, toxic substances and endangered species. Communities such as Portland, Los Angeles, and the Santa Clara Valley have all adopted watershed management policies that are designed to promote coordinated watershed management in direct response to the requirements of state and federal environmental laws. Berkeley belongs in the forefront of the list of communities that have taken that approach.

B. The Case For Protecting Creeks Without Trampling On The Rights Of Property Owners

Any workable policy for regulating creeks and culverts in Berkeley must begin with a recognition that Berkeley is one of the most densely developed urban areas in the United States. That basic reality no doubt explains why the Creeks Ordinance was enacted in 1989 based on representations by proponents of the Ordinance that it would affect only a few vacant lots and would have little or no impact on existing structures. Had there been greater public awareness of what proponents of the Ordinance really had in mind, the firestorm of public criticism that arose when the City suddenly announced its intention in 2004 to begin enforcing the Ordinance strictly would have arisen at the outset, when the Ordinance was enacted.

Despite the representations that accompanied its passage, the Ordinance gradually came to be applied and interpreted far more broadly than its original proponents ever suggested it would be. The lack of fair notice to property owners and the absence of any opportunity for public input has created a profound sense of distrust among the citizenry most directly affected by the Ordinance – those who own property adjacent to creeks. The “back-room” manner in which creeks regulation has been developed over the last two decades in Berkeley runs contrary to one of the most important lessons the CTF has learned in studying creeks regulation in other communities -- public “buy in” from the outset is crucial.

Regulation of creeks and culverts is not a utopian exercise in which we should aspire to return or restore our community to pristine wilderness conditions. Regulation must be undertaken with due consideration for the rights and settled expectations of private landowners.

Residents who live near creeks and culverts should have the freedom to improve, repair and maintain their homes and yards so long as they do so in a manner that does not cause damage to open creeks or buried culverts; and if they ever suffer the misfortune of a loss that requires rebuilding, they should have freedom to rebuild so long as they do so within the pre-existing building envelope.

Pollution, flooding, and the problem of deteriorating and failing culverts are serious problems, but they are problems facing the entire community, not just the citizens who happen to live on or near creeks and culverts. The inflexible regulation imposed on property owners who live near creeks – stemming from the requirement that anyone seeking relief from the setback requirements involves obtaining a Variance, which is virtually impossible to do – severely diminishes property values of those who live near creeks and culverts. Creeks activists are not respecting the rights of property owners and seek to “tax” those who live near creeks and culverts to pay the costs of a regulatory policy that every citizen should bear. That is grossly unfair.

The gross unfairness of the regulatory approach proposed by creeks activists is exacerbated by the breadth of the Ordinance. Oakland, which seems to be the City closest to Berkeley in terms of lot size, density and number of creeks, has excluded culverts, swales and springs from their ordinance. Culverts in particular should not be covered by the Ordinance at all. They should be dealt with purely as a safety and maintenance issue, not as an issue of creeks regulation. To our knowledge, no other ordinance regulates culverts as well as open creeks. Jim Peters of Questa Engineering, who presented his national survey of Creeks Ordinances to the CTF last May, said he believed this is because culverts are not considered creeks. Because culverts are underground and therefore hidden from view, private landowners who live near culverts often do not even know they are subject to the Ordinance. This problem of lack of fair notice has been compounded by the City’s early reliance on preliminary and inaccurate maps to determine the location of creeks and culverts. These maps have changed frequently over time and are expected to continue to be refined in the future. The Department of Public Works can

deal with public safety and maintenance issues for culverts on a case-by-case basis, as they do today. There is no need for a new scheme of culvert regulation.

The Ordinance relies too heavily on arbitrary, “one-size-fits-all” setbacks that do not accommodate the specific conditions facing individual property owners. A case-by-case system for regulating development near open creeks and culverts would be preferable and may well provide even better protection for riparian corridors standardized setbacks. A case-by-case system would allow the Planning Department (for open creeks) and the Public Works Department (for culverts) to use their discretion to give greatest protection to portions of creek and culvert corridors that are most at risk, while permitting development where the benefits of a setback are tenuous or merely theoretical.

Creekside landowners in Berkeley understand that they are the stewards of creeks running through their property, and note that the presence of a creek is often what inspired them to purchase their property. They point out that no evidence has been developed during the CTF’s work to indicate that there are “bad actors” in our midst who are intentionally polluting the creeks or otherwise engaging of patterns of behavior that need to be addressed and correct. Nor is there any trend toward deterioration in the condition of our local creeks that demands more stringent legislation. A case-by-case approach to regulation would allow property owners to demonstrate that their proposed development would not cause harm to the creek because those considerations would have been taken into account by the professionals commissioned to create their plans.

The coercive approach taken by the current Ordinance -- prohibiting development, with few exceptions -- is paternalistic. It assumes that citizens are inclined to conduct themselves in a manner that is harmful to the community as a whole, when in fact there is no evidence that that is the case. The Ordinance should place greater emphasis on creating incentives, promoting education about creeks stewardship, and otherwise helping private landowners to do things that advance watershed policy goals voluntarily. Daylighting is an excellent example. If a private property owner wishes to daylight a culvert on his or her property, that is fine. But that is a

private decision. There is no reason to engage in a public process addressing whether or not there are daylighting “opportunities” on private land. Because of the deep distrust that has been caused by the perceived secretiveness in which creeks regulation has been developed under the Ordinance, the creation of any “daylighting” opportunities list that includes private property will probably be counterproductive. It is likely draw determined resistance and create divisiveness in the community.

Finally, the multiple levels of federal and state regulation that already apply to creeks in Berkeley appear to be sufficient to protect water quality, guard against pollution, and protect wildlife. These other regimes of regulation argue *against* broadening and further tightening the Ordinance, because to do so would create redundancy. Moreover, because the right to grant a permit also gives the right to deny a permit, a broader Ordinance would invite litigiousness and pit neighbor against neighbor. By going beyond roofed structures, and by making the Ordinance applicable in the thousands of instances each year in which people construct such things as decks, patios and fenced gardens, the proposed broadening changes to the Ordinance will increase the number of disputes among citizens. This kind of a social “cost” is not being considered at all by those who zealously advocate in favor of greater creek protection, without regard to the rights of property owners and the true costs of regulation.

VII. RECOMMENDATIONS

In order to provide some context for the CTF’s recommendations and to help the Planning Commission and the City Council understand something about how the CTF arrived at those recommendations, below is a general discussion of the CTF’s work, broken down into the major subject areas. The recommendations themselves are detailed and nuanced. They speak for themselves, and this discussion is not intended to be a substitute for them or to be an exhaustive treatment of them, but rather to provide some background information about the nature of the discussions surrounding them.⁶⁹

⁶⁹Additional commentary, with a more specific focus on setbacks, setback distances, and the

A. Extent of Consensus and Areas of Disagreement

After lengthy deliberations during which the competing policy values set forth above were presented and weighed, the CTF sought to strike a balance, accommodating both perspectives in its recommendations in some ways, but in other ways without going as far as the most zealous advocates of either point of view would have liked to see. One important thing to appreciate about the recommendations, however, is that there is broad consensus on the CTF in support of these recommendations. In fact, one of the most striking aspects of the public hearings was that, putting aside a handful of people who advocated that Ordinance should be repealed in toto, and stripping away some of the more heated rhetoric -- such as the arguments by some speakers about a perceived “taking” of property -- the areas of real dispute are narrow.⁷⁰

riparian buffer science supporting setbacks, may be found in the Memorandum entitled “Rationale for Berkeley Creeks Tasks Force Recommendations,” dated April 11, 2006, attached as Item 6b to the materials for the April 17, 2006 CTF Meeting, and approved by the CTF at its April 17, 2006 Meeting. The primary author of that document was CTF member Phil Price.

⁷⁰The public hearings were valuable sources of information, but the points of view presented at those hearings largely tracked the major issues and themes that arose at CTF Meetings over the course of the CTF’s work. Except for the handful of outliers who argued that there should be no creeks regulation at all in Berkeley, virtually all speakers made statements that may fairly be characterized as falling within the broad spectrum of views summarized above in Section VI, “Competing Policy Values Weighed By The CTF.” Two additional observations about the public hearings are worthy of note, however. First, the CTF did not treat the public hearings as a “popularity contest” in which it counted or tried to assess the sheer number of speakers for one point of view versus another. It must be borne in mind here that the fact that there exists a notification list for potentially affected creekside landowners is no doubt, itself, relevant to the number of people who decided to attend these hearings. Many other “potentially affected” citizens – for example, those who live in the West Berkeley flat-lands and who are directly affected by flooding when the City’s drainage system is strained beyond its capacity – may not have been as well-represented in the CTF’s process, but that does not mean their interests are any less important than those of creekside landowners. Second, it was apparent that some speakers at the public hearing were simply mistaken about what the CTF was actually considering or about how the Ordinance works. The RWQCB has pointed out that, in communities where political resistance to creeks regulation has been strong, this type of misinformed opposition appears to be common. RWQCB, *Local Government Riparian Buffers in the San Francisco Bay Area*, at 12 (“Many landowners have misconceptions about existing and proposed riparian buffer ordinances. Often landowners assume that their land will be transferred to public ownership. In addition, landowners are often unfamiliar with existing land-use restrictions and state and federal law pertaining to wetland fill and stream alteration.”).

The same is true of the CTF itself. Each of the Statements of Agreement and each of the Recommendations is supported by at least nine members of the CTF, in most cases more than nine. There is broad agreement among all but a few CTF members (i) that the original policy rationale for the Ordinance remains just as valid today as it was in 1989 and that therefore the Ordinance should be retained; (ii) that the use of setbacks is a valid and effective tool for creeks regulation and is common in other communities that have adopted creeks legislation; (iii) that, for open creeks, the 30 feet from centerline setback distance is supported by the available science and is consistent with creek setback distances used in other communities, although certain refinements to the 30-foot rule are in order; and (iv) that the problem of failing culverts in Berkeley is serious and warrants some regulation of development near culverts, although not under the same set of setback rules that applies to open creeks.

B. “Creek” Definition.

The controversies surrounding the Ordinance that arose in the wake of the 2323 Glen Avenue case and that led to the creation of the CTF focused in large part on the definition of “Creek.” For the most part – and with the important exception of whether culverts should be included in that definition, thus subjecting culverts to exactly the same setback rules that applied to open creeks -- the CTF supports the basic definition of “Creek,” as amended in 2002. The “Creek” definition is very broad; it includes seasonal creeks, creeks that run intermittently, and swales and depressions that may not even appear to be creeks. But that broad definition is consistent with the hydrology of creeks that was described by experts and reported about Berkeley’s network of creeks by our consultant, Balance Hydrologics.

At the headwater, for example, creek hydrology is characterized by smaller channels and intermittent flows. Balance reported that, if anything, the smaller, intermittent flows at the headwater are arguably deserving of wider setbacks, even though the channel geomorphology may be less well defined than it is downstream. Thus, while, at the margins, a broad definition

of “Creek” inevitably presents some administrative challenges in determining what is, and what is not, a “Creek,” the CTF found no reason to narrow the basic definitional language. There were suggestions from time to time that the Ordinance should include only on a few “major” open creek corridors -- an approach that would require significant narrowing of the “Creeks definition – but this view did not attract much support among CTF members. On the whole, the definitional approach that the CTF adopted is consistent with the view that creeks regulation should be based on an overall watershed-oriented approach.

C. Culverts.

The one area in which the CTF does recommend changing the “Creek” definition has to do with culverts. Essentially, the CTF recommends that the City Council reverse the decision that it made in 2002 to include culverts in the definition of “Creek.” By including culverts in the “Creek” definition, the 2002 amendment – which was based on the City Attorney’s December 1991 interpretative opinion – required the same 30-foot setbacks for both open creeks and culvert, and failed to take into account that the rationale for having setbacks is significantly different for open creeks than it is for culverts. The CTF’s consultant, Balance Hydrologics, advised that setbacks should be chosen with careful attention to the policy objectives for which setbacks are being used. In recommending that open creeks be regulated differently than culverts, which will in turn require that a separate definition for “Creek Culverts” be created, the CTF is doing exactly what Balance advises: matching the rationale for regulating culverts to the setback distance.

In recognition that development directly over culverts can create bearing loads that contribute to culvert failures and to ensure adequate access to storm drains for purposes of repair and maintenance, the Public Works Department has developed a setback formula that, in essence, requires setbacks to be at least the distance from the ground surface to the bottom of the culvert pipe. The CTF is of the view that this is a reasonable approach to setbacks as well, which

is why it recommends treating creek culverts similarly to storm drains for purposes of establishing setbacks. It would be a mistake to view the risks and hazards created by creek culverts as exclusively limited to structural and repair issues, because the CTF consistently heard from presenters that, at the intersections of culverts and open creeks, culverts tend to exacerbate problems of bank erosion, water velocity, and deposition of concrete and other pollutants into the water, thus creating acute safety and health risks. While this tends to suggest that at those particular locations, the same setback rules that apply to open creeks might be warranted, on the whole the CTF felt that because the principal policy rationale for regulating culverts has to do with repair and maintenance, the approach taken by Public Works to setbacks for storm drains is most appropriate for culverts.⁷¹

Much of the controversy at the public hearings surrounding the culverts issue concerned whether culverts should be covered by the Ordinance, or should simply be taken out of the Ordinance entirely. This issue is largely symbolic. No one has argued that culverts ought to be wholly unregulated, and no one has argued that same setback regime should continue to apply to culverts and open creeks, an aspect of the current Ordinance that everyone recognizes is a major flaw. Rather, the issue is whether the new regime for regulating culverts should be placed in the Building Code or in the Ordinance itself.⁷² Those who have argued for taking culverts out of the Ordinance and regulating them elsewhere in the Municipal Code point out that no other city of which we are aware includes culverts in its creeks ordinance. That is a significant point -- since it suggests that, by regulating culverts as part of its creeks regulation regime, Berkeley is doing

⁷¹At its April 17, 2006 Meeting, to be sure, the CTF adopted a recommendation that City Staff be given discretionary, case-by-case authority to decide upon appropriate setback distances at these critical creek-culvert intersection points.

⁷²If culverts were to be taken out of the Ordinance entirely, the Department of Public Works has stated that it would have to be given new authority to carry out the administration of culvert setbacks in the same way that it administers storm drain setbacks. Taking culverts out of the Ordinance without giving the Department of Public Works that authority would be inconsistent the near-unanimous view of all CTF members that culverts should be regulated, the only issue being where that regulation should originate within the Municipal Code.

something no other city has done -- but it also may simply reflect the fact, unlike Berkeley, most other communities do not have culverts that are as extensively intertwined with their open creeks as ours are, and, and because, particularly many communities are not as old as Berkeley is, they do not yet face culvert repair and maintenance problems of the magnitude and urgency that we face in Berkeley.

On balance, after carefully considering the arguments for and against each side of the debate over whether to include culverts in the Ordinance or not, we have concluded that culverts should be covered by the Ordinance. The City has made a clear choice in its General Plan in favor of an overall, coordinated policy of watershed regulation. The CTF majority is of the view that addressing culverts within the Creeks Ordinance is not only consistent with the policy of dealing with the watershed in an overall coordinated way, but serves to promote that policy most effectively by ensuring that, administratively, the regulation of open creeks and creek culverts is properly coordinated, and that nothing “falls between the cracks.”

D. Rebuilding

The issue of rebuilding destroyed or damaged homes is another area in which it may appear that there is more division on the CTF than exists in reality. The CTF’s recommendation that rebuilding be freely allowed after a loss within the same building footprint so long as the rebuilding is carried out in accord with all applicable provisions of the Building and Zoning codes is in line with the City Council’s amendment to the Ordinance in November 2004.⁷³ Some members of the CTF wish to use this process as a platform to force the City to change the Zoning Ordinance to drop the Use Permit requirement for reconstruction of all existing buildings after damage or destruction, **whether or not it is a creekside property**. In the view of the majority

⁷³ To be sure, the CTF has recommended that, following a loss, owners of destroyed homes that were within an open creek setback prior to the loss, be *encouraged* to build farther away from the creek. But that if that recommendation were adopted, it would create no new impediments or burdens; it would be completely voluntary.

of the CTF, to suggest at this point that a Use Permit not be required to rebuild on a creekside property would place these properties under less restrictions than other properties. This is not only unwise, it goes against the intent of the Creeks Ordinance. In addition, it is beyond the CTF's purview. The CTF was not asked to undertake an overall review of how land-use regulations in Berkeley apply to homeowners following a loss.

E. Daylighting

The CTF's recommendations relating to daylighting generated vigorous discussion among CTF members. Here again, the appearance of divisiveness over this issue on the CTF may be more apparent than real. Much of the discussion of daylighting among CTF members focused on whether the City's daylighting policy should be limited exclusively to publicly owned land. No one argues that daylighting should ever be coercive or mandatory; hence inclusion in the CTF's Statements of Agreement that all daylighting should be voluntary. The debate over daylighting on the CTF centers on whether the list of daylightable properties that we recommend should be developed out to include private properties or not. The majority of the CTF is of the view that the inclusion has an important educational function. By bringing daylighting opportunities to the attention of private property owners, the City will enable private property owners to know whether daylighting on their properties is feasible or not. This is likely to require more than one property owner along a culvert being both interested and willing. There seems to be a lot of confusion among homeowners at this point. There are property owners who have expressed interest in daylighting but the City is currently not able to advise them of feasibility and therefore is not in a position to be supportive. Without looking at all properties, the City is unable to fulfill its stated intention in the General Plan to encourage daylighting whenever feasible.⁷⁴

⁷⁴Policy EM-27 of the General Plan provides "[w]henver feasible, daylight creeks by removing culverts, underground pipes, and obstructions to fish and animal migrations."

F. Setbacks Applicable to Open Creeks

The one major area in which there has been, and continues to be, disagreement of real practical significance among CTF members involves setbacks for open creeks. As noted above, there is broad consensus on the CTF that Berkeley's 30-foot-from-centerline setback regime, while it needs a number of important modifications and refinements,⁷⁵ should be retained. Throughout the CTF's deliberations, a minority of the CTF consistently opposed that view and argued instead that any restrictions on development in the vicinity of creeks should be undertaken on a case-by-case basis. In the view of the CTF majority, the case-by-case approach is both confusing to the public and difficult for City staff to administer. Based on the experience of Oakland, it would favor wealthier citizens who can afford to hire consultants and other professionals to make the case that their proposed development does not "harm the creek"; it would invite unequal treatment among citizens and non-uniform application of creek protection measures; and it would create uncertainties for citizens who wish to undertake development projects, since there would be no set of known, easy-to-understand standards to address.⁷⁶

⁷⁵The number of modifications and refinements are too detailed to describe here, but in general the CTF spent a great deal of time constructing a proposed scheme to deal with for home modifications. The CTF also tried to alleviate somewhat the inflexibility of the Ordinance subjecting certain types of development to an AUP process rather than a Variance process, and by giving property owners the opportunity to seek an exemption from the Ordinance by AUP in a 5 foot zone just inside the 30-foot setback. There is strong support on the CTF for a firm "no build" zone of 25 feet from creek centerline. Hence, within that zone, the CTF retains the core prohibition of the existing Ordinance: No development without a Variance.

⁷⁶Ironically, it is also worth noting that, while the property owners who resist any sort of standard setbacks regime also tended to be the constituency who employed the rhetoric of "takings," according to the case law cited in the legal presentation to the CTF one of the few situations in which legal challenges to land-use regulations are actually viable is where there is arbitrary, inconsistent application of regulations. *See* Summary of Presentation of Ellison Folk and Carmen Borg at May 16, 2005 CTF ("Ad hoc rules vs set rules: Generally recommend using pre-established standards to avoid claims of inconsistent administration of an ordinance."). Thus, it may well be that adopting the case-by-case approach to creeks regulation would be the most vulnerable to legal challenge.

We also note, and place great weight, on the recommended regulatory approach of the RWQCB. And the RWQCB strongly discourages using a case-by-case approach to creeks regulation. RWQCB, Local Government Riparian Buffers in the San Francisco Bay Area at 14, (describing communities where policy-makers responded to political pressure from landowners by “focusing on the design review of permit process as a way to limit development within riparian zones....This approach leads to a case-by-case approach to stream setbacks that can be inconsistent and inefficient.”); *id.* at 15 (“‘case-by case’ or ‘project-by-project’ approach to riparian regulation may result in inconsistent or inadequate riparian protection.”); *id.* (“‘case-by-case approach [can be] tantamount to not having a riparian policy at all”).

G. Regulated Structures and Landscaping

The CTF recommends some significant broadening of the Ordinance with respect to regulated structures and landscaping. While the current Ordinance only covers roofed structures, the CTF proposes that the Ordinance also apply to certain types of unroofed structures (*ie.* decks, patios, driveways, and other impermeable surfaces). This recommendation is consistent with information provided to the CTF by several presenters suggesting that this type of development presents significant risks to the health of creeks. Because structures such as decks deteriorate and collapse, they can be the source of obstructions and toxics-laden material falling into creeks. And because the run-off from impermeable surfaces increases the flow of gas and oil residue, fertilizers and other chemicals into creeks, they are a major source of pollution. Thus, there is a sound rationale for extending the Ordinance in this manner.

H. Watershed Coordinator and Development of Integrated Watershed Management Policy

Finally, the CTF recommends a number of policy initiatives that are designed to further move Berkeley further in the direction of adopting an overall, unified and coordinate approach to integrated watershed management. We recommend, for example, that Berkeley create and fund a Watershed Coordinator position to perform a variety of coordination tasks in furtherance of

creeks policy and overall watershed management. If there is any areas of unanimity on the CTF, it is that the City should provide assistance to property owners in their efforts to preserve and protect creeks; take proactive steps to educate the public about “best practices” concerning creeks; and adopt to the greatest extent possible an integrated, watershed-oriented approach to water runoff in the City, whether in open creeks, culverts or storm drains; and to seek grant funding for creeks-related projects. The Watershed Coordinator would have responsibilities in all of these areas.