Twin Lakes Stakeholder Group
July 20, 2016 – 4 pm to 7 pm
Agenda
Location: Boulder Rural Fire Protection - 6230 Lookout Road

4:00 pm **Welcome and Introductions**

4:05 pm **Recommendations to Council: Density**
Building on their discussions to date, the Stakeholder Group will discuss density options for the Twin Lakes properties. Following the discussion, the group will agree what on to recommend to Council.

5:05 pm **Recommendations to Council: Guiding Principles**
Building on their discussions to date, the Stakeholder Group will discuss guiding principles for any future development on the property should it occur. Guiding principles can be drawn from the list of interests below, and/or new ideas can be proposed. Following the discussion, the group will agree what on to recommend to Council.

5:30 pm **Break**

5:40 pm **Resume Discussion of Guiding Principles**

6:15 pm **Recommendations to Council: Additional Studies**
Building on their discussions to date, the Stakeholder Group will discuss whether there are any additional studies desired for the Twin Lakes properties and, if so, what areas of expertise would be important for contractors doing those studies. Following the discussion, the group will agree what on to recommend to Council.

6:50 pm **Next Steps**
- Writing and reviewing the final report
- Expectations going forward

7:00 pm **Adjourn**

Council Motion
Move that BVCP Requests #35 and #36 be further considered and analyzed, with the following request: That Boulder County Housing Authority, Boulder Valley School District, and Twin Lakes Action Group engage in an open and transparent facilitated discussion comprised of representatives of each group who are vested with the authority to speak for and bind their respective constituents. Each group should have equal representation and the discussion should be facilitated by an independent facilitator selected by the City of Boulder, with facilitator compensation shared between the City of Boulder and Boulder County. Boulder Valley School District shall be requested to be part of the process and if agreeable to pay an equitable share of the costs.

The three groups are expected to do the following, with the timing of work to align with the BVCP process:

1. Jointly formulate recommendations for areas of expertise and selection of experts to inform the desired land use patterns for the area. The areas for study should include the suitability for urban development, desired land use patterns, and environmental constraints.
2. Jointly recommend the appropriate range of potential housing units with consideration given to intensity and community benefit, regardless of who holds title to the property.
3. Following the outcome of the BVCP process and 1 and 2 above, jointly recommend a timeline for the formulation of a set of guiding principles to inform next steps.

While Council requests these groups engage in such good faith facilitated discussions, the failure of such discussions, for any reason, shall not affect Council's determination that BVCP Requests #35 and #36 be further considered and analyzed.

STAKEHOLDER INTERESTS AT TWIN LAKES

- Meet housing needs.
- Provide affordable housing needs for workers of BVSD and other entities.
- Utilize land that is near existing infrastructure and jobs.
- Plan both sites of Twin Lakes together.
- Create program synergies between BVSD and BCHA.
- Create broad community support.
- Protect the environment and wildlife.
- Develop neighborhood amenities.
- Develop property to meet community interests and needs.
- Retain teachers and other employees throughout the County.
- Develop a vision and plan for Gunbarrel.
- Avoid setting regrettable legal precedents.
- Be able to offer permanent affordable housing as a recruitment tool for new teachers.
- Protect the rural-residential feel of the neighborhoods and surrounding lands.
- Collaborate on the creation of information and entire discussion.
- Base decisions in facts and science.
- Allow for a transparent process and open discussions.
- Allow all parties to remain up-to-date and informed on the progress of the process.
- Protect homes that already exist.
- Ensure ability to maintain infrastructure.
- Preserve agricultural lands.
- Move the process along at an appropriate pace.
- Learn from and improve on past projects.

POTENTIAL WATERS OF THE UNITED STATES ASSESSMENT

6655 Twin Lakes Road
Boulder, CO
T1N, R70W, Section 14
Boulder County, Colorado

Apex Project No. 420263

Prepared for:

2525 13th St.
Boulder, CO 80304

June 2016

TABLE OF CONTENTS

1.0 - Introduction 1
1.1 - Regulatory Background 1
2.0 - Project physical setting 2
3.0 - Methodology 2
4.0 - Results 3
4.1 - Vegetation 3
4.2 - Soil 3
4.3 - Hydrology 3
5.0 - Conclusions 3

LIST OF APPENDICES

Appendix 1 - Figures
Appendix 2 - Photographs
Appendix 3 - Wetland Determination Data Form

1.0 INTRODUCTION

The purpose of this assessment is to determine whether 10-acre property at 6655 Twin Lakes Rd. (Property) contains jurisdictional Waters of the U.S.

On May 16, 2016 Apex Companies, LLC (Apex) was asked by Boulder County Housing Authority (BCHA), on behalf of BCHA and Boulder Valley School District (BVSD) to conduct field investigations within two adjacent properties on Twin Lakes Road, Boulder, Colorado. Specifically, to determine if there are wetlands present within the property boundaries. The properties are being considered collectively for residential development. This report details the findings within the northern of the two properties, 6655 Twin Lakes, which is owned by BCHA. The results of the field investigation for the southern property, 6600 Twin Lakes Rd., owned by BVSD, are presented in a separate document.

1.1 Regulatory Background

Section 404 of the Clean Water Act of 1972 provides the U.S. Army Corps of Engineers (USACE) the authority to permit the discharge of dredged or fill material into "waters of the United States (U.S.)". The definition of "waters of the U.S." was defined in the Act and through three Supreme Court cases: U.S. v. Riverside Bayview (1985), Solid Waste Agency of Northern Cook County (SWANCC) v. USACE (2001), and Rapanos v. U.S (2006). These court cases lead to uncertainty regarding the extent of the jurisdiction of the Clean Water Act. On August 28, 2015, a new Clean Water Rule became effective, in which the USACE and EPA sought to provide clarity and define "waters of the U.S." On October 9, 2015, the 6th Circuit of the U.S. Court of Appeals granted a stay to the rule. At the time of this report, waters of the U.S. will be evaluated under the old rules.

Under the old rules, the term "waters of the U.S." is defined as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce; and
- The territorial seas.

In 2006, *Rapanos v. United States* clarified that waters of the U.S. are also defined as: Traditional Navigable Waters (TNW) and their adjacent wetlands; non-navigable tributaries of TNWs that are relatively permanent; and wetlands that directly abut such tributaries. In addition, the *Rapanos* decision clarified that the USACE asserts jurisdiction over every water body that is not a relatively permanent water (RPW) if that water body is determined to have a significant nexus with a TNW. A significant nexus exists if the tributary, in combinations with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, or biological integrity of a TNW.

The limit of USACE jurisdiction for non-tidal waters of the U.S. in the absence of adjacent wetlands is the ordinary high water mark (OHWM). "Ordinary high water mark" is defined as that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). To be considered a wetland, an area must have: (1) a prevalence of hydrophytic vegetation, (2) hydric soils, and (3) appropriate wetland hydrology. The feature must have a hydric connection or significant nexus to a waters of the U.S. in order to be considered jurisdictional under Section 404.

2.0 PROJECT PHYSICAL SETTING

The Property is located within a developed area known as Gunbarrel, a census-designated residential and commercial development in Boulder County, CO. Together with 6600 Twin Lakes Rd., the BCHA and BVSD properties are adjacent to Twin Lakes Open Space to the north (Figure 1). Twin Lakes Open Space is approximately 42 acres, and consists of two reservoirs surrounded by trails, marshes, wetlands, upland and deciduous forest, and is itself virtually surrounded by commercial and residential development. An irrigation ditch, Boulder and Left Hand Ditch, that also serves as a wildlife corridor abuts the south side of Twin Lakes Open Space. A reach of Boulder and Left Hand Ditch is National Wetlands Inventory-mapped as a freshwater forested/scrub wetland (Figure 2.) It was this mapped wetland, and the adjacent, roughly parallel Boulder and Whiterock Ditch that raised initial concerns regarding the presence of wetlands and Waters of the U.S. when the Property was first considered for development.

The Property is bounded on the west and east sides by single and multi-family residences, on the south side by Twin Lakes Rd., and on the north side by Boulder and Whiterock Ditch, mentioned above (Figure 1). The Property is highly-disturbed, and has been intermittently farmed and plowed for many years, presumably for hay production. No other significant hydrologic, topographic, or soils factors are present on the Property with respect to the requested wetland investigation and delineation. Soils on the property are predominantly Longmont clay through the center of the Property, gently down sloping 1-3% northward, grading to Nunn clay loam, which includes the ditch along the northern edge of the Property (Figure 3).

3.0 METHODOLOGY

Wetland delineation was conducted along the northern perimeter of the Property, and into the Boulder and Whiterock Ditch channel and associated riparian corridor (Figure 2), following the U.S. Army Corps of engineers (USACE) Wetlands Delineation Manual (1987), along with USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008).

Prior to the field investigation, a detailed desktop Geographic Information System (GIS) analysis was conducted to determine if any off-Property hydrologic factors or physical landscape features might warrant inclusion in this report or alter the scope of the field investigation. None were determined to significantly affect the approach to, or results of, the assessment. On May 23, 2016, a pedestrian survey of the property, using 20' transects, was conducted. No other

vegetative or hydrologic indicators of wetlands were observed on the Property that warranted a wetland investigation other than the northern perimeter and riparian channel.

4.0 RESULTS

The results of the vegetation, soil, and hydrology observations are included as Appendix 3, Wetland Determination Data Forms, and are summarized below.

4.1 Vegetation

The riparian corridor had three vegetation strata: tree (50% cover), shrub (50%), and herb (40%) (Photo 1). The tree stratum was dominated by *Salix amygdaloides* (peachleaf willow, facultative wetland plant, (FACW)) and Populus Deltoides (cottonwood, facultative plant (FAC)). The shrub stratum on the north side of the channel was dominated by *Salix exigua* (narrowleaf willow, FACW). There was very little shrub stratum on the south side of the channel, with the exception of a short segment of *Ribes spp.* (gooseberry, FACW) and *Salix exigua*.(Photo 2). The herb stratum on the south side of the riparian channel was dominated by *Bromus inermis* (smooth brome, upland plant (UPL)), *Bouteloua dactyloides* (buffalograss), *and Smilacina stellata (*false Solomon's seal*,* facultative upland plants (FACU)). The herb stratum on the north side of the riparian channel was dominated by *Typha latifolia* (broadleaf cattail, obligate wetland plant (OBL)) and *Ribes spp.*

4.2 Soil

Four soil pits were excavated for observation (Figure 3). The pits were located to provide representative soil profiles from the channel bottom, channel bank, and upland (Figure 3).

- The channel bottom soil (Photo 3.a) demonstrates continuously saturated hydric soil, consistent with the F1 indicator. The lack of redox concentrations in this profile, together with the gray/green upper soil color (Appendix 3), and an eroded, mossy soil surface, demonstrate continuous inundation/saturation, creating a reducing moisture regime (aquic moisture regime, USACE, 1987)
- The channel bank soil profiles (Photo 3.b), roughly two feet upslope in the channel demonstrate a more variable saturation level, and obvious redox concentrations.
- The upland profile (Photo 3.c) does not contain clear hydric indicators, and is a typical profile for Nunn clay loam soils in the surrounding upland.

4.3 Hydrology

The riparian corridor was characterized by flowing surface water, a high adjacent water table, and soil saturation, all Group A primary wetland hydrology indicators (USACE 1987). Water marks and sediment deposits, Group B wetland primary hydrology indicators, were present throughout the channel.

5.0 CONCLUSIONS

Please note: The final authority in determining jurisdiction of a water feature, including significant nexus decisions, rests with USACE.

The wetland mapped in Figure 4 has been delineated by Apex, using methods and guidance set forth by USACE, as noted in Section 3.0 Methodology, and represents a freshwater emergent

wetland. The delineated and mapped wetland does not indicate terminus of the wetland to the east or west, only the areal extent of the delineation conducted and/or extrapolated based on observation.

The delineated wetland is confined to the south bank of Boulder and Whiterock Ditch, up and northward of the north bank. The steep south bank of the ditch meets an abrupt hydrologic and vegetative change at the top of the bank, and outside the channel is not a delineated wetland to the south (Appendix 3). The north bank of the ditch, apparently far less disturbed, possesses the same hydric soils and hydrology indicators, and also meets both the prevalence index and dominance test for hydric vegetation. The northern boundary of the wetland was not delineated, as it is off of the Property, thus not within the geographic scope of this assessment: *thus the wetland polygon drawn in Figure 4 is by visual estimate only on the northern boundary.*

These services and this report were performed and prepared in accordance with generally accepted local assessment practices at the time the services were performed; no warranties, express or implied, are intended or made. The limitations of this assessment should be recognized as the client formulates conclusions on the environmental risks associated with construction of the proposed Project. Furthermore, the services herein shall in no way be construed, designed, or intended to be relied upon as legal interpretation or advice.

APPENDIX 1

Figures

Boulder Housing Authority

Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Figure 1. Location map of Twin Lakes area, Boulder County, CO.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Figure 2. National Wetlands Index freshwater emergent wetlands (green/gray polygons) in relation to 6600 and 6655 Twin Lakes Rd.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

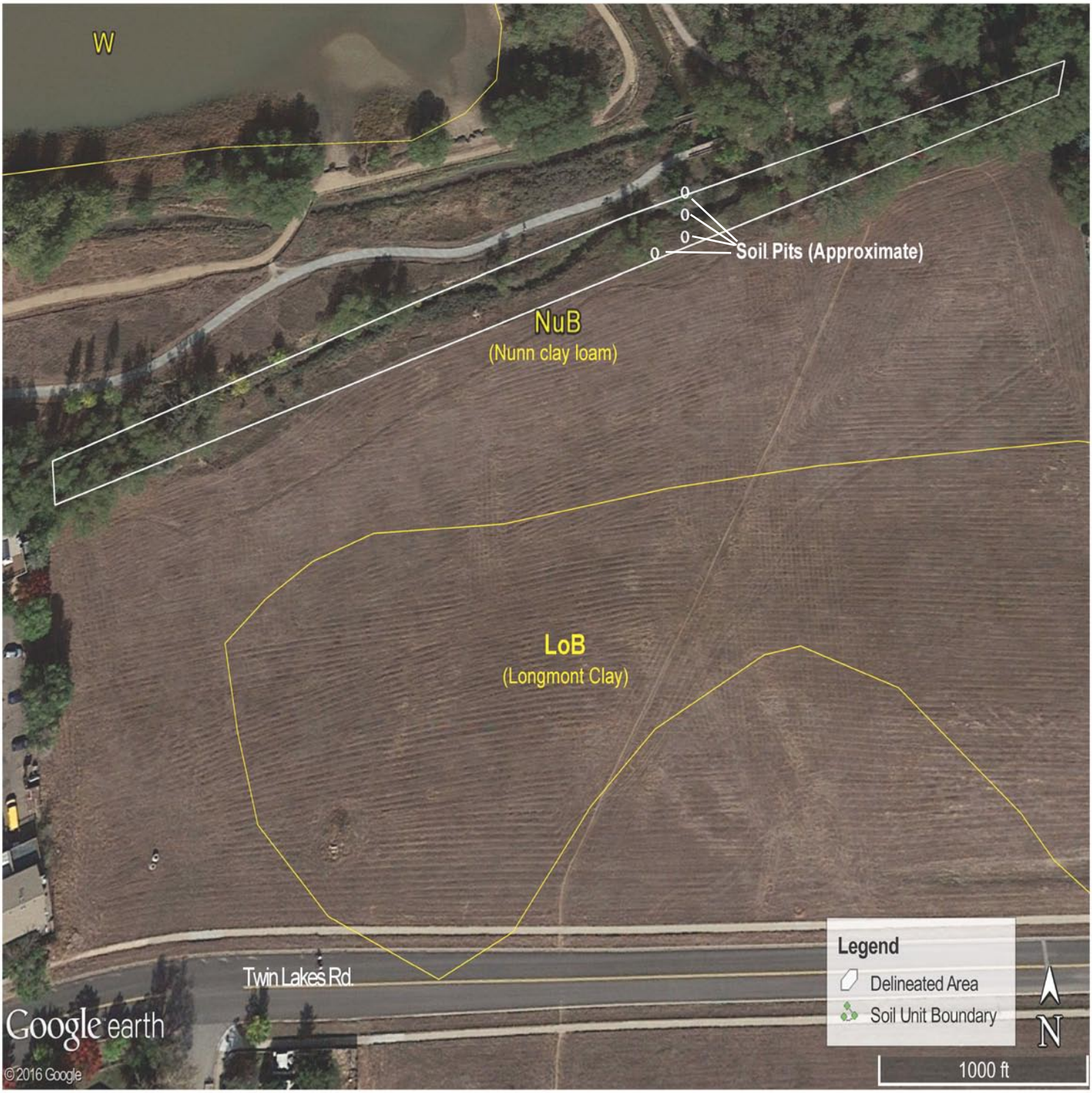


Figure 3. Soils, delineation area, and soil pit locations.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Figure 4. Delineated wetland boundary, freshwater emergent wetland (green). The northern boundary is estimated only, and was not delineated as part of this assessment.

APPENDIX 2

Photographs

Boulder Housing Authority

Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 1. Boulder and Whiterock Ditch, looking west.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 2a. Dominant shrub and tree stratum on the north side of Boulder and Whiterock Ditch.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 2b. Looking west along Boulder and Whiterock Ditch, showing very little shrub strata, except these Salix and Ribes spp. along approximately 30' of the bank.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 3a. Soil profile typical of the channel bottom.

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 3b. Soil profile typical of the north and south channel banks.

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 3c. Soil profile typical of upland areas; Nunn clay loam.

APPENDIX 3

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 6655 Twin Lakes Rd. Mid-Bank City/County: Boulder/Boulder Sampling Date: 5/23/2016

Applicant/Owner: Boulder County State: CO Sampling Point: _____

Investigator(s): Robert Kremer, Ph.D. Section, Township, Range: Section 14, Township 1N, Range 70W

Landform (hillslope, terrace, etc.): Flat/Ag Local relief (concave, convex, none): Insignificant Slope (%): 1

Subregion (LRR): _____ Lat: 40.05 Long: _____ Datum: _____

Soil Map Unit Name: Nunn clay loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____ Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No** _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix amygdaloides	40	Y	FACW
2. Populus deltoides	10	N	FAC
3.			
4.			
5.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix exigua	50	Y	FACW
2.			
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Equisitum hyemale	10	N	FACW
2. Typha latifolia	30	Y	OBL
3. Ribes spp.	10	N	FACW
4. Bromus inermis (primarily south bank)	40	Y	UPL
5.			
6.			
7.			
8.			
9.			
10.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
% Bare Ground in Herb Stratum _____	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 2 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species	40	x 2 = 80
FAC species	10	x 3 = 30
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = 110/50

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Mid-Bank

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	80						
3-14	10YR 4/1	70	10YR 5/6	10	C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- X Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRRI, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRRH outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 4
Water Table Present?	Yes X	No ___	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 8

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 6655 Twin Lakes Rd. Upland City/County: Boulder/Boulder Sampling Date: 5/23/2016

Applicant/Owner: Boulder County State: CO Sampling Point: _____

Investigator(s): Robert Kremer, Ph.D. Section, Township, Range: Section 14, Township 1N, Range 70W

Landform (hillslope, terrace, etc.): Flat/Ag Local relief (concave, convex, none): Insignificant Slope (%): 1

Subregion (LRR): _____ Lat: 40.05 Long: -105.18 Datum: _____

Soil Map Unit Name: Nunn clay loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____ Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix amygdaloides	10	Y	FACW
2. Populus deltoides	5	N	FAC
3.			
4.			
5.			
	15 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix exigua	5	N	FACW
2. Ribes spp.	5	N	FACW
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Bromus inermis	40	Y	UPL
2. Bouteloua dactyloides	20	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
% Bare Ground in Herb Stratum _____	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species	20	x 2 = 40
FAC species	5	x 3 = 15
FACU species	20	x 4 = 80
UPL species	40	x 5 = 200
Column Totals:	(A)	(B)

Prevalence Index = B/A = 335/85

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/2	60						
2-14	10YR 4/3	70						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR F)**
___ 1 cm Muck (A9) **(LRR F, G, H)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRRI, J)**
___ Coast Prairie Redox (A16) **(LRR F, G, H)**
___ Dark Surface (S7) **(LRR G)**
___ High Plains Depressions (F16) **(LRRH outside of MLRA 72 & 73)**
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Dry-Season Water Table (C2)
___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
___ Presence of Reduced Iron (C4)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Sparsely Vegetated Concave Surface (B8)
___ Drainage Patterns (B10)
___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)
___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

POTENTIAL WATERS OF THE UNITED STATES ASSESSMENT

6600 Twin Lakes Road
Boulder, CO
T1N, R70W, Section 14
Boulder County, Colorado

Apex Project No. 420263

Prepared for:

2525 13th St.
Boulder, CO 80304

June 2016

TABLE OF CONTENTS

1.0 - Introduction 1
1.1 - Regulatory Background 1
2.0 - Project physical setting 2
3.0 - Methodology 2
4.0 - Results 3
4.1 - Vegetation 3
4.2 - Soil 3
4.3 - Hydrology 3
5.0 - Conclusions 3

LIST OF APPENDICES

Appendix 1 - Figures
Appendix 2 - Photographs
Appendix 3 - Wetland Determination Data Form

1.0 INTRODUCTION

The purpose of this assessment is to determine whether two parcels, comprising a 10-acre property at 6600 Twin Lakes Rd. (Property) contains potential jurisdictional Waters of the U.S.

On May 16, 2016, Apex Companies, LLC (Apex) was asked by Boulder County Housing Authority (BCHA), on behalf of BCHA and Boulder Valley School District (BVSD) to conduct field investigations within two adjacent properties on Twin Lakes Road, Boulder, Colorado. Specifically, to determine if there are wetlands present within the property boundaries. The properties are being considered collectively for residential development. This report details the findings within the southern of the two properties, 6600 Twin Lakes, which is owned by BVSD (Property). The results of the field investigation for the northern property, 6655 Twin Lakes Rd., owned by BCHA, is presented in a separate document.

1.1 Regulatory Background

Section 404 of the Clean Water Act of 1972 provides the U.S. Army Corps of Engineers (USACE) the authority to permit the discharge of dredged or fill material into "waters of the United States (U.S.)". The definition of "waters of the U.S." was defined in the Act and through three Supreme Court cases: U.S. v. Riverside Bayview (1985), Solid Waste Agency of Northern Cook County (SWANCC) v. USACE (2001), and Rapanos v. U.S (2006). These court cases lead to uncertainty regarding the extent of the jurisdiction of the Clean Water Act. On August 28, 2015, a new Clean Water Rule became effective, in which the USACE and EPA sought to provide clarity and define "waters of the U.S." On October 9, 2015, the 6th Circuit of the U.S. Court of Appeals granted a stay to the rule. At the time of this report, waters of the U.S. will be evaluated under the old rules.

Under the old rules, the term "waters of the U.S." is defined as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All impoundments of waters otherwise defined as waters of the U.S. under the definition;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce; and
- The territorial seas.

In 2006, *Rapanos v. United States* clarified that waters of the U.S. are also defined as: Traditional Navigable Waters (TNW) and their adjacent wetlands; non-navigable tributaries of TNWs that are relatively permanent; and wetlands that directly abut such tributaries. In addition, the *Rapanos* decision clarified that the USACE asserts jurisdiction over every water body that is not a relatively permanent water (RPW) if that water body is determined to have a significant nexus with a TNW. A significant nexus exists if the tributary, in combinations with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, or biological integrity of a TNW.

The limit of USACE jurisdiction for non-tidal waters of the U.S. in the absence of adjacent wetlands is the ordinary high water mark (OHWM). "Ordinary high water mark" is defined as that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE 1987). To be considered a wetland, an area must have: (1) a prevalence of hydrophytic vegetation, (2) hydric soils, and (3) appropriate wetland hydrology. The feature must have a hydric connection or significant nexus to a waters of the U.S. in order to be considered jurisdictional under Section 404.

2.0 PROJECT PHYSICAL SETTING

The Property is located within a developed area known as Gunbarrel, a census-designated residential and commercial development in Boulder County, Colorado. Together with 6655 Twin Lakes Rd., the BCHA and BVSD properties are adjacent to Twin Lakes Open Space to the north (Figure 1). Twin Lakes Open Space is approximately 42 acres and consists of two reservoirs surrounded by trails, marshes, wetlands, upland and deciduous forest, and is itself virtually surrounded by commercial and residential development. An irrigation ditch, Boulder and Left Hand Ditch, that also serves as a wildlife corridor abuts the south side of Twin Lakes Open Space and is the delineated area for a separate delineation report (6655 Twin Lakes Rd.).

The Property is surrounded on the west, south, and east sides by single and multi-family residences, and on the north side by Twin Lakes Rd. (Figure 1). The Property is highly-disturbed and has been intermittently farmed and plowed for many years, presumably for hay production. Along the southern boundary of the Property, a stream flows from east to west into a National Wetlands Inventory-mapped freshwater emergent wetland (Figure 2). It was this stream that raised initial concerns regarding the presence of wetlands and Waters of the U.S. when the Property was considered for development. No other significant hydrologic, topographic, or soils factors are present on the Property with respect to the requested wetland investigation and delineation. Soils on the property are predominantly Nunn clay loam south of Twin Lakes Rd., gently sloping 1-3% southward, grading to Longmont clay, which includes the seasonal stream along the southern edge of the Property (Figure 3).

3.0 METHODOLOGY

A wetland delineation was conducted along the northern perimeter of the stream and associated riparian corridor (Figure 2), following the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987), along with USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008).

Prior to the field investigation, a detailed desktop Geographic Information System (GIS) analysis was conducted to determine if any off-Property hydrologic factors or physical landscape features might warrant inclusion in this report or alter the scope of the field investigation. None were determined to significantly affect the approach to, or results of, the assessment. On May 23, 2016, a pedestrian survey of the property, using 20' transects, was conducted. No other

vegetative or hydrologic indicators of wetlands were observed on the Property that warranted a wetland investigation other than the southern perimeter.

4.0 RESULTS

The results of the vegetation, soil, and hydrology observations are included as Appendix 3, Wetland Determination Data Form, and are summarized below.

4.1 Vegetation

The riparian corridor had three vegetation strata: tree (20% cover), shrub (30%), and herb (85%) (Photo 1). The tree stratum was dominated by *Salix amygdaloides* (peachleaf willow, facultative wetland plant, (FACW)). The shrub stratum was dominated by *Salix exigua* (narrowleaf willow, FACW). In the herb stratum there was a noticeable juxtaposition of in-channel vegetation, with narrow bands of upland vegetation within the broader channel (Photo 1). The in-channel herb strata was dominated by *Nasturtium officinale* (watercress, obligate wetland plant, (OBL)) and *Typha* sp. (broadleaf cattail, narrowleaf cattail (OBL)). Channel edges were dominated by *Carex emoryi* (Emory's sedge, OBL), and the upland bands were dominated by *Dipsacus fullonum* (wild teasel, FACU). The FACW or OBL indicator status of each dominant species in the three vegetation strata demonstrate that hydrophitic vegetation is present throughout the riparian corridor. Upland areas to the north of the riparian wetland are dominated by *Bromus inernum (smooth brome, UPL)* and *Buchloe dactyloides* (buffalograss, FACU).

4.2 Soil

Seven soil pits were excavated for observation (Figure 3). The pits were spaced both along and perpendicular to the riparian corridor in order to optimize mapping the spatial extent of the wetland. Pits within the stream channel, summarized as one in the Wetland Determination Data Sheet (Appendix 3), were nearly identical to each other and possessed strong hydric indicators, including organic matter concentration/stratification, clear redox concentrations, and calcium concretions (Photo 3). The northern three (upland) pits were also identical to one another (also summarized as one data sheet), showing no obvious hydric soil indicators (Photo 4). The transition from hydric to non-hydric soils closely followed the hydric/non-hydric vegetation patterns visible in Photo 5, from the riparian channel on the right (south), to the sloped fringe, to the upland soils to the north.

4.3 Hydrology

The riparian corridor was characterized by surface water, a high adjacent water table, and soil saturation, all Group A primary wetland hydrology indicators (USACE 1987). Additionally, there was salt crust along most of the reach, water marks, and sediment deposits, all Group B wetland primary hydrology indicators.

5.0 CONCLUSIONS

Please note: The final authority in determining jurisdiction of a water feature, including significant nexus decisions, rests with USACE.

The wetland mapped in Figure 5 has been delineated by Apex, using methods and guidance set forth by USACE, as noted in Section 3.0 Methodology. The delineated and mapped wetland does not indicate terminus of the wetland to the east or west, only the areal extent of the delineation

conducted and/or extrapolated based on observation. The delineated area in Figure 5 is approximately 0.55 acres in size.

These services and this report were performed and prepared in accordance with generally accepted local assessment practices at the time the services were performed; no warranties, express or implied, are intended or made. The limitations of this assessment should be recognized as the client formulates conclusions on the environmental risks associated with construction of the proposed Project. Furthermore, the services herein shall in no way be construed, designed, or intended to be relied upon as legal interpretation or advice.

APPENDIX 1

Figures

Boulder Housing Authority

Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Figure 1. Location map of Twin Lakes area, Boulder County, CO.

Boulder Housing Authority
Potential Waters of the United States Assessment

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Figure 2. National Wetlands Index freshwater emergent wetlands (green/gray polygons) in relation to 6600 and 6655 Twin Lakes Rd. The stream flows east to west into the wetland in the lower left.

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

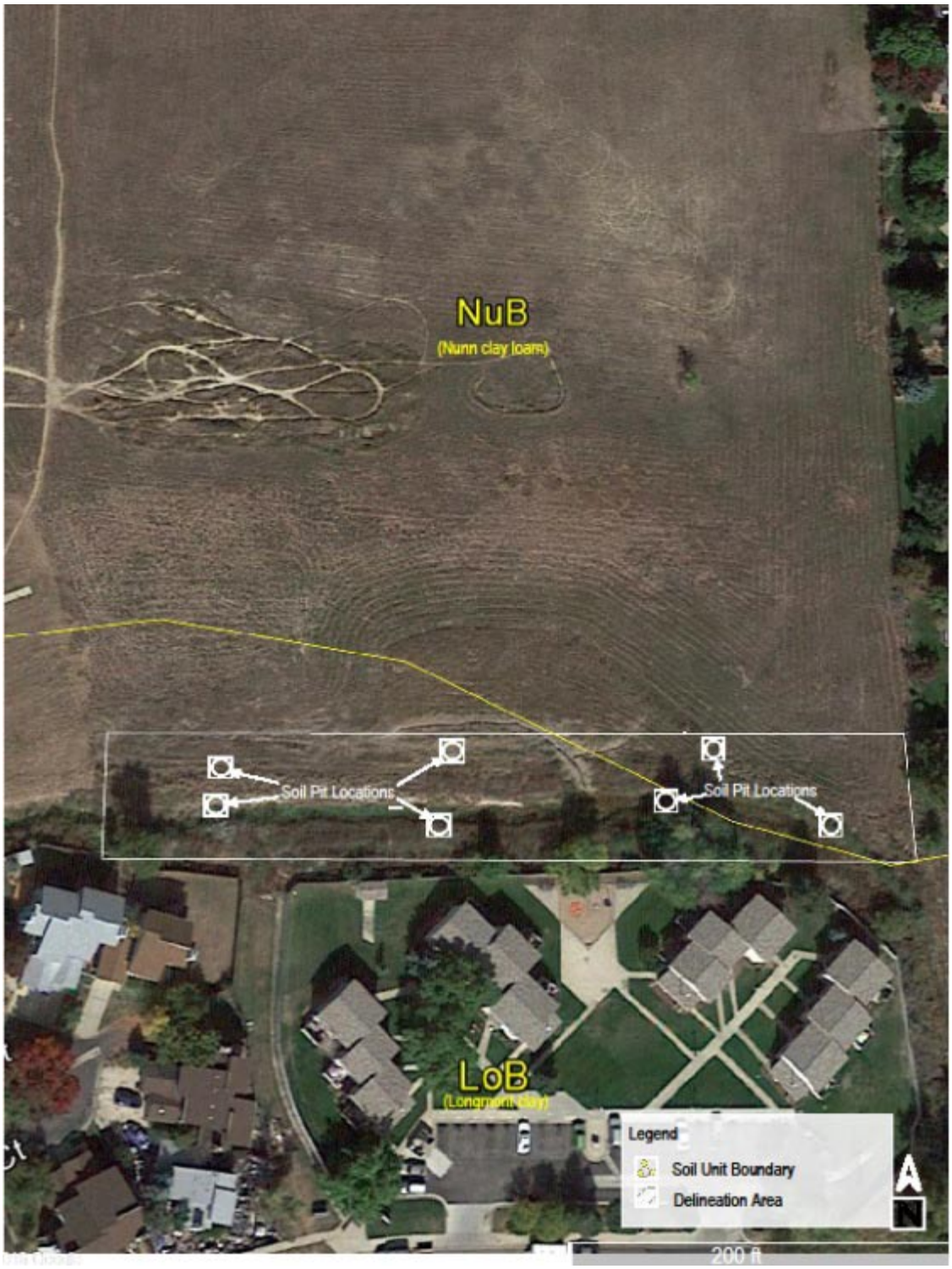


Figure 3. Soils, delineation area, and soil pit locations.

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Figure 4. Delineated wetland boundary.

APPENDIX 2

Photographs

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 1. Vegetation strata along stream wetland, looking east.

Photo 2. Bands of upland hydrology, soils, and vegetation within the riparian corridor.

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 3. Soil common to channel pits, showing hydric indicators such as organic matter stratification, redox concentrations, and calcium concretions.

Photo 4. Upland soil profile, common to upland pits.

Site or Area Name: T1N, R70W, Section 14 **Inspection Period:** May, 2016

Photo 5. Vegetation and hydrology transition evident, from the stream channel on the right (south), upslope toward upland to the north.

APPENDIX 3

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 6600 Twin Lakes Road City/County: Boulder/Boulder Sampling Date: 5/23/2016

Applicant/Owner: Boulder County State: CO Sampling Point: _____

Investigator(s): Robert Kremer, Ph.D. Section, Township, Range: Section 14, Township 1N, Range 70W

Landform (hillslope, terrace, etc.): Flat/Ag Local relief (concave, convex, none): Insignificant Slope (%): 2

Subregion (LRR): _____ Lat: 40.04 Long: -105.18 Datum: WGS84

Soil Map Unit Name: Longmont clay/Nunn clay loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____ Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No** _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 450')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix amygdaloides	20	Y	FACW
2.			
3.			
4.			
5.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 450')			
1. Salix exigua	40	Y	FACW
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 450')			
1. Typhus augustifolia	15	Y	OBL
2. Typhus latifolia	15	N	OBL
3. dipsacus fallonum	20	Y	FACU
4. Nasturtium officinale	20	Y	OBL
5. Carex emoryi	50	Y	OBL
6.			
7.			
8.			
9.			
10.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
% Bare Ground in Herb Stratum _____	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** _____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	70						
3-18	2.5YR 6/2	60	7.5YR 6/6	2	C	M	C	Highly stratified, clear redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- X Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- X Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- X 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRRI, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRRH outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 12

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 4

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: 6600 Twin Lakes Road - UPLAND City/County: Boulder/Boulder Sampling Date: 5/23/2016

Applicant/Owner: Boulder County State: CO Sampling Point: _____

Investigator(s): Robert Kremer, Ph.D. Section, Township, Range: Section 14, Township 1N, Range 70W

Landform (hillslope, terrace, etc.): Flat/Ag Local relief (concave, convex, none): Insignificant Slope (%): 2

Subregion (LRR): _____ Lat: 40.06 Long: -105.18 Datum: WGS84

Soil Map Unit Name: Longmont clay/Nunn clay loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____ Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____ Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Northern 3 of 7 soils pits (data points), Figure 3 of this report.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 450')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 450')			
1.			
2.			
3.			
4.			
5.			
	110 = Total Cover		
Herb Stratum (Plot size: 450')			
1. Bromus inermis	40	Y	UPL
2. Bochloe dactyloides	25	Y	FACU
3. Dipsacus fullonum	10	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
% Bare Ground in Herb Stratum _____	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	70						
3-12	10R 5/4	80						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) **(LRR F)**
___ 1 cm Muck (A9) **(LRR F, G, H)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) **(LRRI, J)**
___ Coast Prairie Redox (A16) **(LRR F, G, H)**
___ Dark Surface (S7) **(LRR G)**
___ High Plains Depressions (F16) **(LRRH outside of MLRA 72 & 73)**
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Dry-Season Water Table (C2)
___ Oxidized Rhizospheres on Living Roots (C3) **(where not tilled)**
___ Presence of Reduced Iron (C4)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Sparsely Vegetated Concave Surface (B8)
___ Drainage Patterns (B10)
___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)
___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Twin Lakes Stakeholder Group (TLSG)
Public Comments / Questions
7/8/16

City and county land use staff wishes to provide clarification on three topics that have been raised during recent meetings. Topics 1 and 2 were raised during a public comment period at the Boulder County Parks and Open Space Advisory Committee (POSAC) meeting on June 23. The third topic was raised at the June 22 Twin Lakes Stakeholder Group open house event.

Topic 1: Clarification of the role of early Boulder Valley Comprehensive Plan references to plans for a 40 acre community park south of Twin Lakes in Gunbarrel, and a map showing the area south and east of the east lake as open space

Staff considers historical context as one factor among several in the analysis of BVCP land use change requests. The earliest versions of the Boulder Valley Comprehensive Plan (BVCP) reference plans for acquisition and development of a 40 acre community park in the area south of Twin Lakes.[1] The Open Space map included in the 1978 version of the plan also shows an area of proposed open space south and east of the east lake, part of a proposed north-south greenbelt. The existence of early plans for community and neighborhood parks in the Twin Lakes area is notable. However, those plans must be considered within a broader historical context.

The Gunbarrel land referenced as the site of planned parks and open space in the early BVCP documents was all part of Area II, with a sub-designation (IIA) indicating annexation of the area was expected within three years.[2] Much of that land is now occupied by the Red Fox Hills (which remains in unincorporated Boulder County) and Brandon Creek (now within City of Boulder jurisdiction) subdivisions. Plans outlined in the initial versions of the BVCP were contingent on assumptions that residential areas of Gunbarrel slated to receive city water and sewer services would promptly annex into Boulder's jurisdiction.[3] In 1978, an annexation proposal was proffered by the city to Gunbarrel with no attached costs, impact fees

---

[1] Boulder Valley Comprehensive Plan, August 1977, p. 51 and Exhibit 2.C.2. Boulder Valley Comprehensive Plan, Revised 1978, p. 23 and Exhibit 2.B.2B

[2] The following definitions for Areas I, IIA, IIB, and III are included in the original 1977 version of the BVCP: "Area I is that area within the City of Boulder which has adequate facilities and services and is expected to continue to accommodate urban development. Area II is the area now under county jurisdiction planned to accommodate urban development, and new urban development is to occur coincident with the availability of adequate facilities and services and not otherwise. This area is projected to be provided required facilities and services by the city during the planning period; Area IIA being the area of immediate focus, the first three years, and Area IIB being accommodated within the balance of the planning period. Area III is the remaining area in the Valley, generally under county jurisdiction and which is not now planned to accommodate urban development for the following reasons: it is not projected that the city will there provide adequate facilities and services within the planning period; no other facilities and services agency comparable to the city is expected in the area; and it is primarily a rural and agricultural area and its character should be preserved and protected.

[3] Boulder Valley Comprehensive Plan, Revised 1978, p. 55, see Note 1. The Capital Improvements Program described in the 1978 version of the BVCP also makes reference to plans for other parks, library services, and recreational facilities in Gunbarrel, contingent on annexation.

or other conditions, but residents rejected the offer.[4] Consequently, the potential for future annexation of Gunbarrel remained uncertain, and development plans evolved. The 1981 updated version of the BVCP included a much more scaled down plan for open space in areas south and east of Twin Lakes. In the 1981 BVCP, the parcel that is now 6655 Twin Lakes Road, and the area now occupied by the Red Fox Hills subdivision received Low Density Residential land use designation, and the area just north of that and east of the Twin Lakes now occupied by the Brandon Creek subdivision was converted to Medium Density Residential.[5]

The BVCP was developed to address growth pressures and concerns about sprawl. A core principle driving the establishment of the BVCP was the notion that a compact, well-defined pattern of development is in the public interest due to its efficient use of land and economic resources, and its ability to effectively support the health, safety and general welfare of the community. Since the original BVCP the vision for growth management in the Boulder Valley has been documented in service area map designations delineating Areas I, II and III.[6] As noted, the land south of Twin Lakes has been in Area II and envisioned as becoming part of the city's jurisdiction and urban development pattern since the original BVCP.

The earliest versions of the BVCP were drafted amidst an active discussion about the importance of linking development with the extension of city services, and development plans for Gunbarrel were at the center of that debate (See Attachment).[7] The city's capital improvement plans at that time were developed based on the expectation that residents of those areas would ultimately share equitably in supporting the full range of urban services the city provides to its citizens, and which are not offered by the county (e.g., libraries, recreation facilities and fire protection). Lacking property and sales and use tax revenue from the residents of Gunbarrel the city did not carry out those early plans for park and other city-supported services in the Gunbarrel area.

It is also important to consider the Twin Lakes parcels in the broader context of open space protection within the planning area. Large and successful city and county preservation programs protect vast areas of open space across Boulder Valley. However, in keeping with the BVCP's vision to achieve a compact, deliberate development pattern, relatively small portions of the planning area are designated to accommodate future development. For those parcels, careful site design holds the potential to incorporate open space values when and if development does occur (e.g., by pursuing clustering of structures, and minimizing or avoiding development on portions of the property that can best serve as natural buffers or connectors with surrounding open spaces).

---

[4] Cornett, Linda, "Gunbarrel Area Voters Reject Annexation," *Boulder Daily Camera*, November 2, 1978.
[5] Boulder Valley Comprehensive Plan, Revised 1981. Boulder Valley Comp Plan Map. Note that a neighborhood park was shown on the eastern edge of the Red Fox Hills development in the 1981 BVCP map.
[6] Boulder Valley Comprehensive Plan, Revised 1978, Service Area Map, Exhibit 3.D.1. following p. 52.
[7] August 8, 1978 memorandum from City of Boulder staff to City Council provides a summary of these issues. This memorandum is attached as an appendix.

Topic 2: Clarification of the role of Article 7-1308 of the Boulder County Land Use Code, and whether it would be necessary for POSAC or Planning Commission to review a transfer of land from Boulder Valley School District for use in the proposed affordable housing development

County staff finds that Article 7-1308 of the Boulder County Land Use Code does not apply to the situation that exists with the Twin Lakes parcel owned by the Boulder Valley School District (BVSD). County staff interprets Section 7-1308 of the Boulder County Land Use Code to only apply if, under 7-1301, the dedication on the plat is deeded to Boulder County, and not to the school district. Here, the dedication and deed were made to, and accepted by, BVSD, so Boulder County would not have a regulatory role in the sale of the property.

Section 7-1308 does not explicitly state that it is limited to situations in which the dedication and deed were made to the county. However, the condition is implied, as it would only be possible for the county to sell land which it owns. This interpretation is supported by the language in 7-1301.B which says that, in the case of a school district, the school district "may request that the Board sell the land." The Board can't sell the land if, as in the Twin Lakes example, it was conveyed to BVSD 50 years ago. Also, even if the Board (county) did own this land, there is no potential role for the county to play unless and until BVSD makes a request that the Board sell the land. In the current situation, BVSD is free to sell its land without any involvement by the county.

For context, a summary of key elements of Article 7-1300 of the Boulder County Land Use Code follows.

Article 7-1300 of the Boulder County Land Use Code allows the BOCC to require the dedication of land within a development that is deemed necessary to serve the residents of the proposed subdivision. In lieu of dedication of sites and land areas, the BOCC, after review by the Planning Commission and with advice from the potential receiving party (i.e. BVSD), may require payment of a sum of money not to exceed the full market value of the land.

7-1301 says that all dedicated lands shall be designated on the final plat as outlots. Outlots are to be deeded to the county or other appropriate agency at the time of recordation of the final plat (which is supposed to reflect to whom it is dedicated).

7-1304 is titled "Required School Dedications" and requires the dedication of 750 square feet of land per dwelling unit for single family residences and 500 square feet per dwelling unit for multifamily residences, "or other reasonable criteria approved by the specific school district and passed by Resolution of the BOCC." Dedications to school districts shall be a condition of approval by both the Planning Commission and the BOCC.

7-1304.A.2 says that when, "after recommendation by the appropriate school district, dedication of all or portions of the required school lands is not deemed feasible or in the public interest," the school district may recommend to the BOCC that there be a guarantee of future land dedication (developer is

required to submit a letter guaranteeing a future dedication to the school district) or cash-in-lieu of land.

7-1307 describes the cash-in-lieu option. The applicant (developer), at the option of the BOCC after advice from the potential receiving body, may pay the county cash-in-lieu of a land dedication "where the dedication is unacceptable."

7-1308 is titled "Release of Land or Cash" and says that, after final approval of a subdivision plat and receipt of dedications, the Board shall give written notification to the appropriate school districts and local government entities. After such notice, a school district or local government entity may request the dedication for a use authorized by this section; or, after review by the Board, the lands will be transferred to the appropriate school district or local governmental entity.

7-1308.B says that, in the case of a school site, if, after completion of the platting, it is determined the receiving body no longer finds a need for such land, the school district may request that the Board sell the land. In such an instance, prior to the sale, both the Planning Commission and POSAC shall review the action (§ 7-1308.B.1). If the county sells the land, all moneys paid to the county for the sale shall be held by the Board to be used for the acquisition of other lands for schools, development of land for park purposes, or growth-related planning functions by school districts for educational purposes. Funds may be released to the appropriate school district if the Board finds that the proposed use of the funds is compatible with the cash-in-lieu payment or sale of the land.

Topic 3: If the (Twin Lakes) properties are annexed into the city, will that enable the city to forcibly annex the neighboring residential neighborhoods?

No. The Twin Lakes annexation does not create an enclave of any properties. The city can only unilaterally annex properties that have been completely surrounded by city boundaries for three years (defined as an "enclave"). A boundary that consists solely of a right-of-way cannot create an enclave.

Generally speaking, statues require annexations to be voluntary by the land owner filing a petition requesting to be annexed, except where the enclave rule applies (C.R.S. § 31-12-107). The only instance where unilateral annexation is allowed is when unincorporated areas are entirely contained with the boundaries of the municipality for at least three years (C.R.S. § 31-12-106). The BVCP has a long standing policy to "actively pursue annexation of county enclaves, Area II properties along the western boundary, and other fully developed Area II properties." (BVCP 1.24.b Annexation). While the residential neighborhoods surrounding the Twin Lakes properties are in Area II, they do not meet the conditions under which the city would actively pursue annexation. Also, in recognition of the long history around annexation in Gunbarrel and lack of interest of unincorporated neighborhoods in annexation, the city and county adopted policy language specific to the area in the BVCP which states:

BVCP Policy 1.24 Annexation: h) The Gunbarrel Subcommunity is unique because the majority of residents live in the unincorporated area and because of the shared jurisdiction for planning and service provision among the county, the city, the Gunbarrel Public Improvement District and other special districts. Although interest in voluntary annexation has been limited, the city and county continue to support the eventual annexation of Gunbarrel. If resident interest in annexation does occur in the future, the city and county will negotiate new terms of annexation with the residents.

State Statutes

C.R.S. § 31-12-106 Annexation of Enclaves, Partly Surrounded Land, and Municipally-Owned Lands

"When an unincorporated area has been entirely contained within the boundaries of a municipality for at least three years, the municipality may annex the property by ordinance without regard to the eligibility requirements in C.R.S. § 31-12-104, the limitations in C.R.S. § 31-12-105, or the hearing requirements of C.R.S. § 31-12-109."[8]

C.R.S. § 31-12-107 Petitions for Annexation and Annexation Elections

"Except for the unilateral municipal annexation authority described in the preceding section, all annexations must be requested by the owners of land that is eligible under the general annexation criteria. The statute provides two alternative procedures by which annexation may be accomplished:

> (1) landowner petition [more than 50% of the landowners owning more than 50% of an area eligible for annexation, excluding streets and alleys]; and
>
> (2) annexation election [may be submitted by electors who are residents and landowners in an area eligible for annexation…the petition must be signed by at least 75 qualified electors or 10% of the qualified electors in the affected area, whichever is less].[9]

[8] Elliott, Donald L. Esq., General Editor Colorado Land Planning and Development Law, Seventh Ed. 2006. . pg. 193.
[9] Ibid. Pp. 193 – 195.

APPENDIX

AUGUST 8, 1978 MEMORANDUM FROM CITY OF BOULDER STAFF TO CITY COUNCIL

RECEIVED
AUG 8 1978
LAND USE
DEPARTMENT

M E M O R A N D U M

August 8, 1978

TO: City Council

FROM: Ed Gawf and Chris Cares, Planning Department

SUBJECT: Gunbarrel Annexation Study Session

I. INTRODUCTION

On August 8, 1978, the City Council will be considering the Gunbarrel area in a study session. At this meeting, the main focus will be on the areas of Gunbarrel which are designated as residential on the Comprehensive Plan. Areas being considered for annexation at this time will be described, current cost/revenue projections for annexing the Gunbarrel area will be presented, and the City Council will be asked to recommend continuing on the time schedule contained in this memo.

The study session comes as a result of a previous study session, held on September 27, 1977, on annexations. At that meeting, annexations in Area IIA were described as playing an important role in implementing the Boulder Valley Comprehensive Plan. The City Council identified three areas for major annexation efforts in the next year and directed the Planning Department to begin working in North Boulder immediately. A large area of North Boulder was recently annexed following a positive vote by property owners in the district. The staff now proposes to bring the question of annexation of the Gunbarrel residential areas to a similar vote.

II. HISTORY

The history of the Gunbarrel area is, by now, probably quite familiar to all members of the City Council. However, a short chronology of dates and agreements is included here as a reference.

The Gunbarrel area was established with the direct assistance of the City of Boulder. This relationship between the two entities was formalized under a contract between the City of Boulder and the Boulder Valley Water and Sanitation District (BVWSD), providing for water and sewer service to residential, commercial and industrial uses within the District. The first Ordinance (#2684), approved in June, 1963, states that, "It is the desire of the City and of the Distributor that the Distributor's service area be annexed to the City of Boulder as soon as practicable after the area, or any part thereof, becomes eligible for annexation." In addition, the contract provided that a user within the BVWSD service area must commit, "When his land is eligible to join in any petition for annexation and shall do all things reasonably necessary, including voting in favor of annexation, to insure that the user's land will be annexed when eligible."

The annexation of the Gunbarrel area did not occur according to the timetable that was originally anticipated. During 1974 and 1975, the

Planning Board and City Council discussed several possible annexation routes to Gunbarrel, and approved the route through City-owned open space as the one that would best accomplish the City objective of placing itself in a position to annex the area. In 1975, a series of meetings was held with the Gunbarrel Citizens Advisory Committee concerning annexation and the services to be provided upon annexation. Following these meetings, residents of Gunbarrel were polled concerning annexation. An overwhelming majority (87% of the residents voting) responded that they did not want to be part of the City at that time.

In November, 1975, the City Council approved a resolution declaring the City policy concerning Gunbarrel. The Resolution (#197) read:

> Section 1. The best interests of the Boulder Valley and the City of Boulder are not served by the creation of additional incorporated cities or quasi-municipal entities within the Boulder Valley Comprehensive Plan area.
>
> Section 2. The City must extend its boundaries to be in a position to annex the area known as Gunbarrel when and if circumstances are appropriate.

During 1976, the City Council proceeded to annex City-owned open space along the western and northern boundary of the Boulder Valley. In 1977, the City Council approved a series of annexations which took in the industrial and commercial properties in Gunbarrel. These annexations placed the City in a position where the contiguity was established to permit annexations of residential areas in Gunbarrel.

III. AREA PROPOSED FOR AN ANNEXATION ELECTION

The map on page 4 shows the Gunbarrel area. The existing City limits are shown, and the Area IIA line from the Comprehensive Plan is clearly marked. The map shows that much of the remaining unannexed Gunbarrel area is already platted into residential lots. The major subdivisions are labeled on the map.

In addition to the developed or partially developed residential areas, there are seven major undeveloped properties that must be considered in any annexation discussions. These developments, with their expected number of units are: 1) the Homestead (Bill Lanning), 94 units; 2) the Willows (Larry Robinson), 233 units; 3) Heatherwood 7th Filing (Wood Brothers Homes), 32 units; 4) Jay Road (Don Unkefer), 95 units; 5) Red Fox Hills (Bill Carran), approximately 108 units; 6) Habitat, 1100 units; and, 7) Fountain Greens, 541 units. The developments are all shown on the map.

In order to hold an annexation election, the requirements of the State Annexation Statutes (C.R.S. 1973, Sections 31-12-101 through 31-12-122) must be followed. In addition to the requirement that an area have one-sixth contiguity with the annexing municipality before annexation can take place, there are other significant provisions in the law.

These include limitations on who can sign the petition calling for an election ("qualified electors"), the number of signatures that are required to call an election (the lesser of 75 qualified electors or 10% of these electors), and a restriction on who can vote in the election (property owners). The law has strict requirements for public notice, a public hearing, and the conduct of the election; the result of these regulations is that a considerable amount of lead time is needed to set up an election and a strict timetable must be followed.

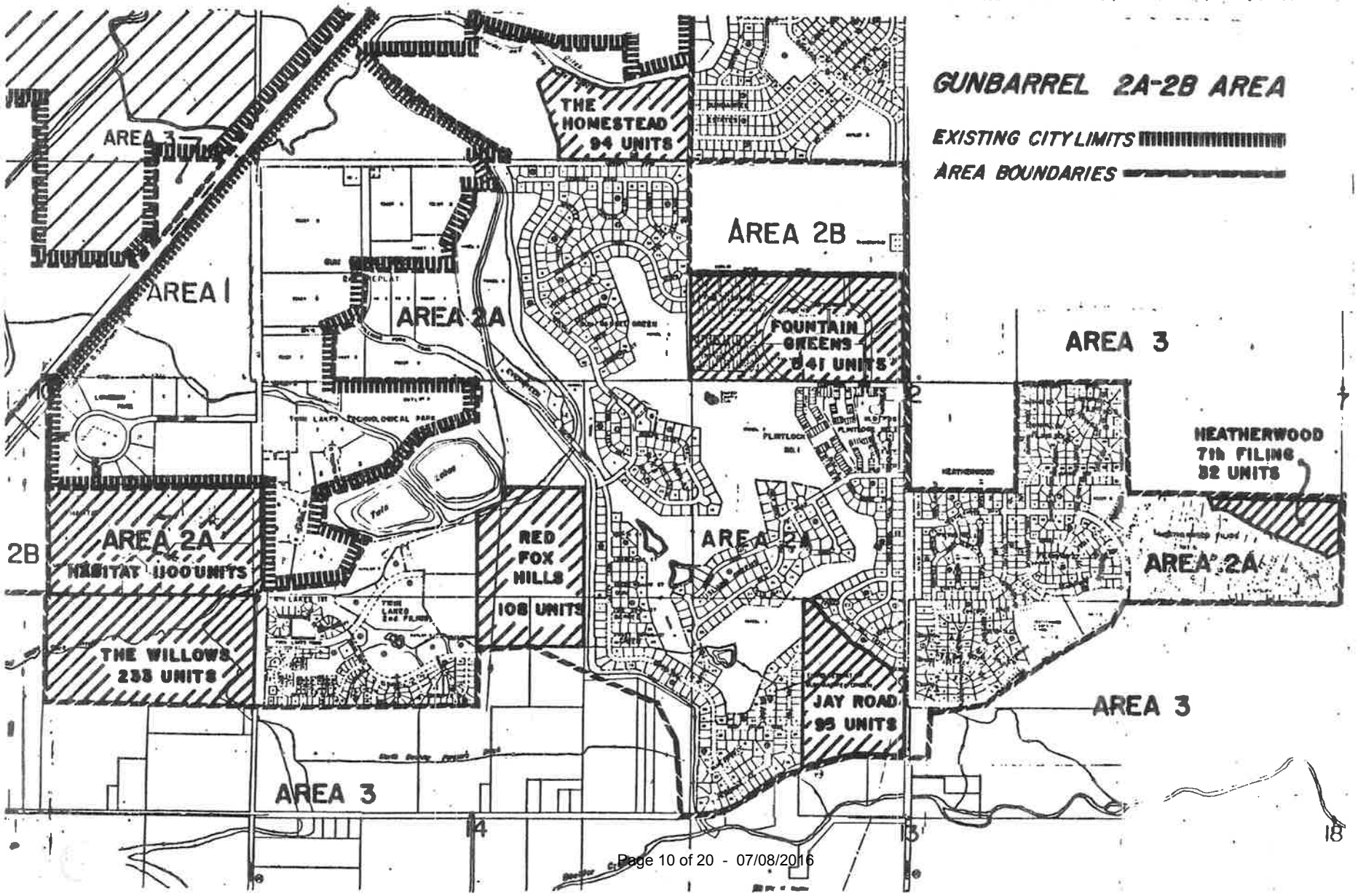
Another significant provision in the annexation law states that no land held in identical ownership comprising twenty acres or more, which together with improvements thereon has a valuation in excess of two hundred thousand dollars, shall be included in an election without the written consent of the owners. There are three properties in Gunbarrel--Habitat, Fountain Greens, and the Country Club, which exceed these requirements and their inclusion in the annexation area will depend on the consent of the owners.

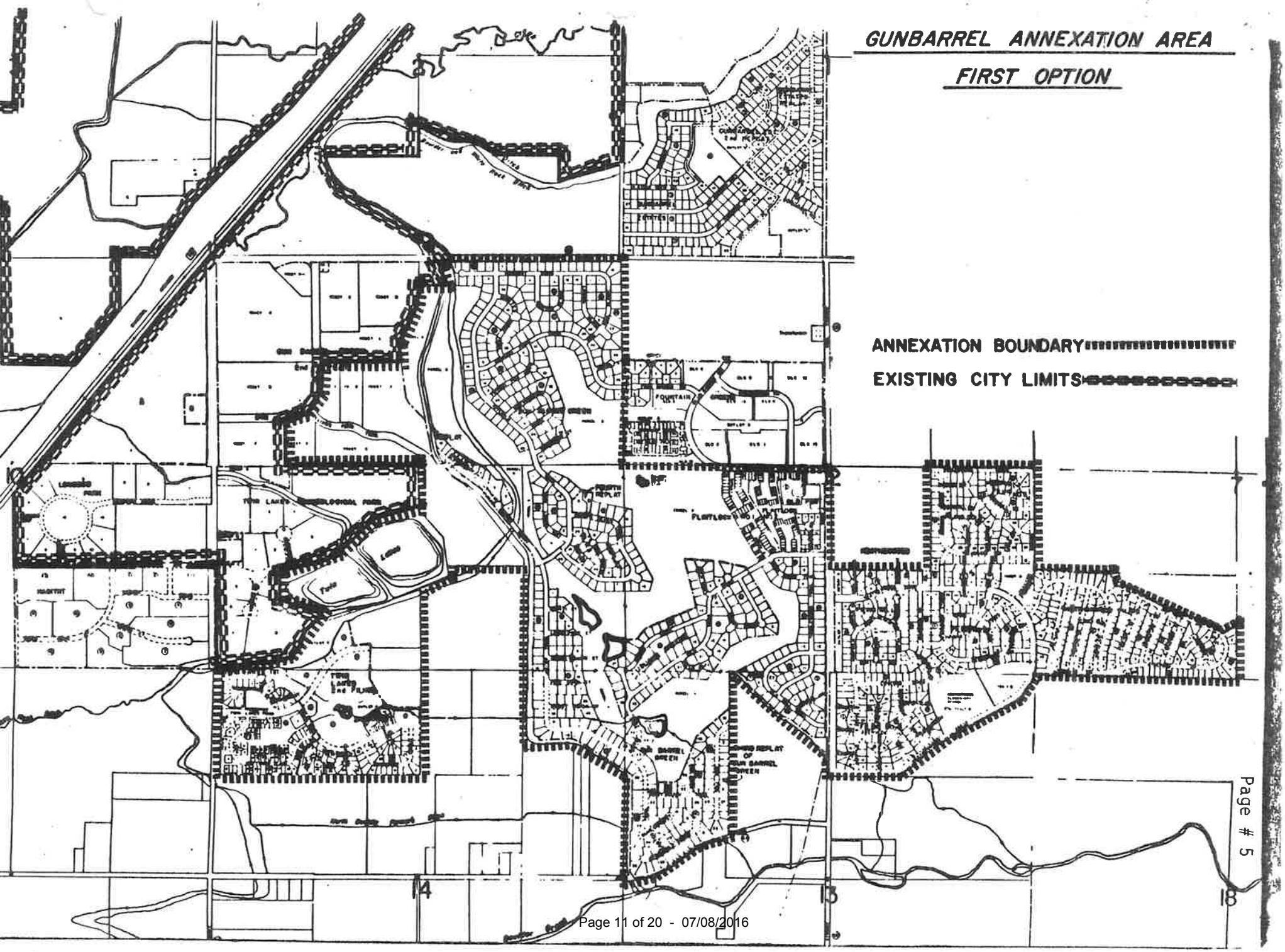
It is important to understand the general requirements of the State annexation law and the patterns of ownership in Gunbarrel to consider the options available in setting up an annexation election. Basically, there are two alternative annexation areas that should be considered. One possible annexation district could be described to include the developed residential area, including the Boulder Country Club, and Fountain Greens and Habitat if they indicate a willingness to be included. This annexation area is shown on the map on page 5 as Option 1. An alternative approach would be to hold an annexation election within all of the 2A Area of Gunbarrel. Such an election would involve all of the developed properties and would also include the five properties with development plans that are approved or partially approved in Boulder County. This alternative is mapped on page 6 , labeled Option 2.

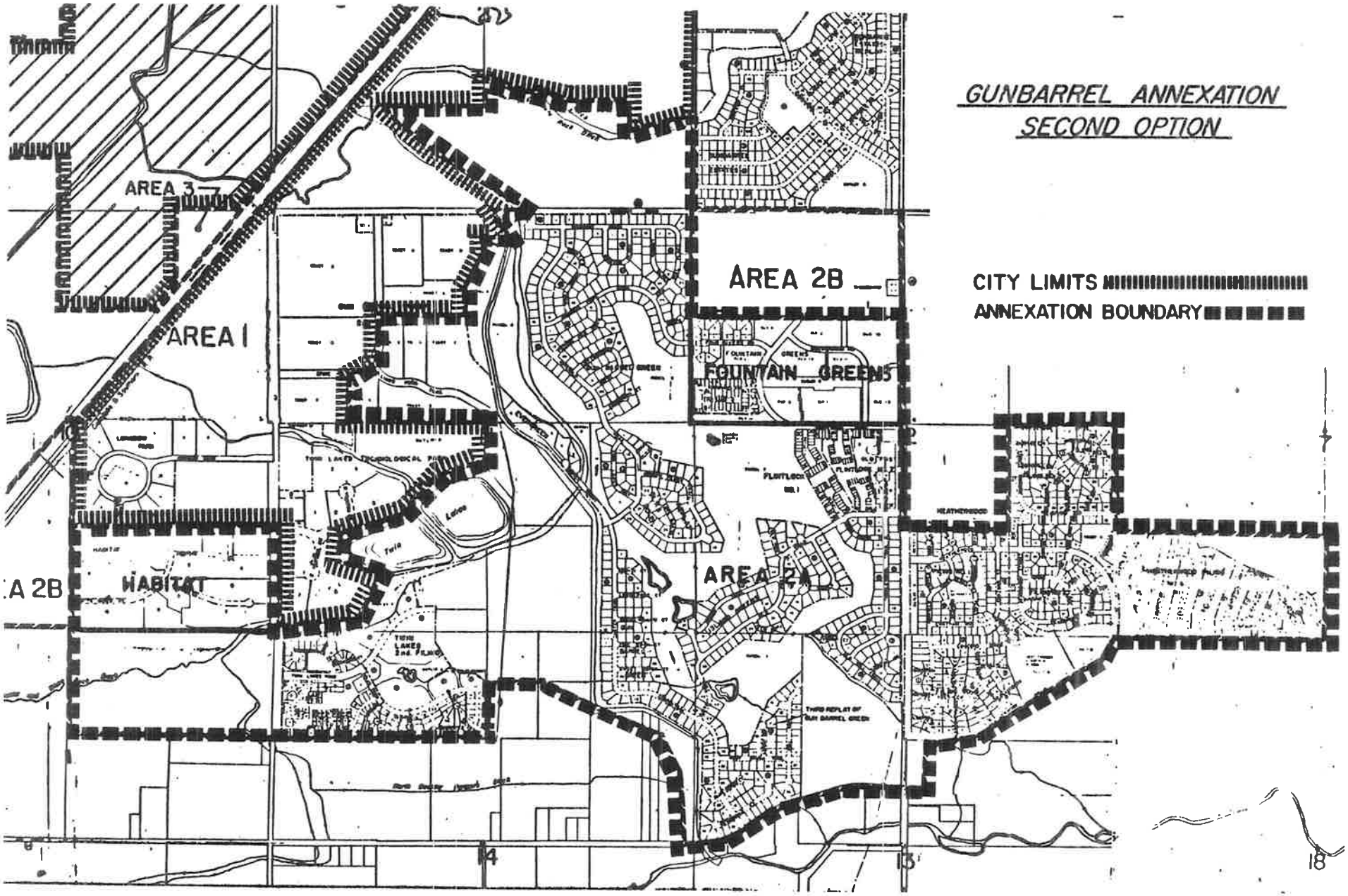
A. Option #1

Option 1 would permit the annexation question to be decided by property owners with, for the most part, developed properties. The annexation area would include all of the major existing developments in Gunbarrel except Fountain Greens and Habitat, and we would expect the outcome of the election to reflect sentiment in the predominantly owner-occupied area. Each property owner would have one vote. It is expected that at some time subsequent to the election, the City would begin contacting property owners not included in the election to request their annexation.

The principal advantage to Option #1 would be that the outcome of the election would be clearcut, it would be less likely to be subjected to challenges by developers concerned with protecting County-approved


GUNBARREL 2A-2B AREA
EXISTING CITY LIMITS
AREA BOUNDARIES
AREA 3
AREA 1
AREA 2A
AREA 2B
THE HOMESTEAD 94 UNITS
FOUNTAIN GREENS 841 UNITS
AREA 3
HEATHERWOOD 7th FILING 82 UNITS
AREA 2A
AREA 2A
HABITAT 1100 UNITS
RED FOX HILLS 108 UNITS
AREA 2A
THE WILLOWS 255 UNITS
JAY ROAD 93 UNITS
AREA 3
AREA 3
2B
10
2
1
14
13
18


GUNBARREL ANNEXATION AREA
FIRST OPTION
ANNEXATION BOUNDARY
EXISTING CITY LIMITS
14
15
18


GUNBARREL ANNEXATION
SECOND OPTION
CITY LIMITS
ANNEXATION BOUNDARY
AREA 3
AREA 1
AREA 2B
FOUNTAIN GREENS
HABITAT
AREA 2A
14
15
18

Page # 6

development rights. However, this approach might permit the development of a certain number of units outside of City Growth Limitation Ordinance restrictions and it will require additional processing time to approach individual owners at a later date. It would not insure the complete annexation of Area 2A as was anticipated within the original three-year time period contained in the Comprehensive Plan.

B. Option #2

A second approach would be to include all of Area 2A, with the exception of Habitat and Fountain Greens, in the annexation election. In such an election, the five approved but undeveloped residential properties would have only as many votes as there are property owners (partners), and the area would be annexed if it is the majority sentiment. The advantage to this approach is clear -- it brings about a large-scale annexation in a single action, if the vote is positive.

The difficulty with this approach is that it increases the risk of litigation regarding the validity of the annexation. Unfortunately, the risk of challenges is difficult to evaluate, but the possible time delays deserve careful attention in evaluating the two election area options.

C. Conclusion

The Planning Department has attempted to give a balanced presentation of the two options available for describing the election area. We would recommend that Option #2 be chosen by the City Council. We believe that it will provide a decision regarding the annexation question in a manner which is most efficient from the standpoint of the City, and will allow for a timely resolution of the annexation question by residents of the area.

IV. GUNBARREL REVENUE/EXPENDITURE ANALYSIS

In February, 1977, the City Council considered the fiscal implications of annexing Gunbarrel. At that meeting, the staff presented a series of scenarios showing projections of what Gunbarrel revenues and expenditures would be under alternative sets of assumptions. The staff has revised these projections to include the additional information that is now available following annexation of the industrial and commercial areas. In 1977, we were dealing with projections of revenues and expenditures; we are now prepared to supplement our analysis with the findings of the past year.

The scenario that is attached to this memo on page 9 includes the current known revenues from the industrial and commercial areas. It is

based on the assumption that the residential area of Gunbarrel will be annexed in 1978 and, consequently, we will begin to receive property taxes from this area in 1980. The property taxes from the industrial and commercial areas will begin to accrue in 1979, while sales and use taxes from these areas begin immediately upon annexation.

The scenario was developed in the same way as the 1977 projections and is presented in the same format. The rate of assumed residential development was revised downward (from 150 new units per year to 75 units per year) to take into account the effect of the Growth Limitation Ordinance on new units being developed in the City. Current estimates of sales and use tax revenues are based in part on contacts with major commercial and industrial users in the Gunbarrel area, but beyond 1981 assumptions about revenues have been made.

The scenario shows a large gain in revenues from Gunbarrel, primarily because of new development in the industrial area. However, the proposed annexation of the residential area requires expenditures which begin to offset the revenues currently being received. The most important assumption underlying the "Expenditures" section of the scenario concerns the work program that is proposed. It is essentially the same program that was reviewed by the City Council in 1977 at the study session, and was included in the 1978 and 1979 six-year Capital Improvement Plans. Some of the projected City expenditures are for services that will be needed to serve only the commercial and industrial areas that are already in the City. These expenditures are, in effect, previous commitments. Other expenditures are projected if the annexation of the residential area occurs. These expenditures would not occur without a positive vote by the residents to join the City.

The work program for Gunbarrel called for certain immediate services to the commercial and industrial area which began with annexation last year. These included fire, police, street maintenance, and building code enforcement. These same services will begin upon annexation of the residential area. In addition, the following services and improvements have been programmed for Gunbarrel to follow the annexation of the residential area:

Services and Operational Expenses	Capital Improvements
Full animal control	5-acre park
Full parks maintenance	Community park
Library service	Multi-purpose building construction, including library facilities
Youth service workers	Additional police car
Recreation services	
Building maintenance	

The major change in the work program is that, given the current and anticipated revenue position of the City, some of the Gunbarrel programs have been expanded. For example, while the Heatherwood five-acre park is still included, a "community park", which was shown on the Comprehensive Plan and the Parks and Recreation Master Plan, has been substituted for the Habitat park shown in the previous scenario. Similarly, the size of

SCENARIO III (Revised)

FINANCIAL DATA:	1977	1978	1979	1980	1981
Beginning Balance	--	(33,043)	166,430	261,791	156,447
ADD: Revenues	310,857	581,711	1,244,536	1,310,432	1,400,587
SUBTRACT: Expenditures	343,900	382,238	1,149,175	1,415,776	1,490,062
Ending Balance	(33,043)	166,430	261,791	156,447	66,972

SERVICES:

1977: Build Fire Station, Purchase police car.

1978: (Commercial and industrial area only) Police, Fire, Street Maintenance, Code Enforcement picked up within existing budgets.

1979: (Include residential) Police, Fire, Streets, Code Enforcement, Animal Control, Heatherwood 5-acre park improvement, acquire community park land

1980: Increased Police, Develop Community Park, maintenance for five acre park.

1981: Larger multi-purpose building and one-half year operations, Maintenance for Community Park.

ASSUMPTIONS:

No park fees

75 housing units built each year

The scenario is based on the inclusion of the developed properties in Gunbarrel.

(Revised Aug. 1978)

the multi-purpose building has been enlarged, street maintenance programs have been increased, the animal control program has been expanded, and additional code enforcement is projected. The effect of these increases would be to ensure that the Gunbarrel area is brought up to full service levels rather than getting minimal programs in the initial years following annexation.

A second change in the work program also becomes possible after reviewing the current scenario numbers. This change would "move up" several of the projects, the intent being to bring the area to full service levels as rapidly as possible. The staff considered the work program from the standpoint of which services are needed most and concluded that the two parks could be completed earlier, given current revenue estimates. Not only would the earlier construction get the facilities into use more rapidly, but because of current rates of inflation, the work will be less expensive. For this reason, the scenario shows the parks projects in 1979 and 1980 rather than in 1981 and 1982. Similarly, the multi-purpose building would be constructed in 1981.

The staff recommends that the City Council approve the work program as shown in the scenario. We believe that this package of services will bring Gunbarrel up to City standards, and as shown in the projections, the expenditures necessary to complete the program will be offset by anticipated revenues through the projected time period.

V. CONDITIONS OF ANNEXATION

The staff is not proposing conditions as part of the annexation of the residential area of Gunbarrel at this time. This approach would differ from that used in North Boulder where there was a series of conditions placed on the annexation. The difference between the two areas lies in the level of development that currently exists. While North Boulder did not have improved streets and sewer and water service, Gunbarrel has developed with such improvements. Under the provisions of the original BVWSD agreement, the City of Boulder has reviewed the subdivision plats and development plans for Gunbarrel prior to approval by the County. Consequently, the improvements that exist, including streets, sewer and water lines, flood control and drainage installations, and the widths of the various dedicated public rights-of-way, have been previously reviewed and approved by the City Staff.

The question of park fees is a subject that the City Council may wish to address on Tuesday night, and that the staff will be prepared to discuss. Park fees are a normal City of Boulder development requirement that the Council may wish to consider as a possible condition to be included in the annexation election. The current park fees for single-family homes are $145.00 per unit. In Gunbarrel, the original BVWSD agreement did not contain a provision for park fees. In fact, in 1963 at the time the agreement was signed, the City did not charge park fees.

Community development fees were not assessed to the industrial and commercial lands in Gunbarrel. Because park fees were not included in the original agreement and were not charged for the previous Gunbarrel annexations, we have not included these fees as a recommended condition for annexation at this time. Of course, park fees and all other applicable in-City development fees would be charged for new units obtaining building permits in Boulder after the date of annexation.

The BVWSD has contacted the City on several occasions concerning the possible dissolution of the District and take-over by the City. The request is that after the District is dissolved, the City would retire the remaining $302,370 of bonded indebtedness of the District. This subject is addressed in Doug Smith's memo on page 14.

The staff believes that this question should be considered following the annexation election. If the election vote is positive, we would recommend that the City, with the support of the Board of Directors of the District, petition the District Court for a dissolution election. Provided that annexation occurs, we would recommend that the mill levy for the District be eliminated, and that the City assume all duties and responsibilities of the District.

Although the staff is recommending against imposing conditions on residents to be included in the annexation election, it must be recognized that the City is stating its intent to perform a work program that will become, in effect, Boulder's part of the annexation agreement. The City will be assuming responsibility for performing services in the Gunbarrel area and will be expected to complete construction of the capital improvements projects proposed for Gunbarrel according to the work schedule contained in the scenario. The only factor that would alter this is if revenues fall significantly below the projections contained in the scenario; then Council may wish to reevaluate the timing of the work program. We believe that the work program is fair and realistic, that it can be accomplished as shown.

VI. THE SCHEDULE

The staff has prepared a tentative schedule for conducting an annexation election in Gunbarrel. Although the schedule may be changed, many of the dates are relatively inflexible because of the requirements contained in the Colorado annexation statutes. Our purpose is to hold the annexation election and complete the annexation process by the end of the year. In so doing, the City would avoid incurring service obligations in 1979 when property tax revenues would not begin until 1981. By completing this process this year, we could receive property tax revenues in 1980.

GUNBARREL ANNEXATION SCHEDULE

August 15 (Regular City Council Meeting)	- Consider resolution setting public hearing
or August 22 or August 29 (City Council Special Meeting)	- To consider resolution setting public hearing
September 6, 7, 11, 13, 14	- Alternative dates for large public meetings in Gunbarrel
October 3 (Regular City Council Meeting)	- Public hearing and designation of election date and commissioners
November 1 (Wednesday)	- Election date
November 7 (Regular City Council Meeting)	- Election results in, and Ordinance approved on First Reading
November 21	- Second Reading of Ordinance
December 20	- 30-day waiting period ends and annexation is final

VII. CONCLUSION

In summary, the staff would like to seek Council direction on bringing the question of annexation of the Gunbarrel residential area to a vote of the property owners in the area. Specifically, the staff asks that the City Council respond to the following questions:

1) Should the staff prepare and have circulated petitions for an annexation election for the area shown on page 6 (Option 2)?

   The staff recommends that the annexation election be held within the boundaries shown on page 6.

2) Is the City Council willing to commit to the provision and timing of services, both capital and operational, as shown in the scenario on page 9?

   The staff is recommending that the work program be approved and that construction be planned according to the timetable shown in the scenario, provided annexation of the residential area occurs.

3) Should the City of Boulder, with concurrence of the Boulder Valley Water and Sanitation District Board of Directors, agree to dissolve the BVWSD and pay off the existing bonded indebtedness that exists over and above cash reserves of the District?

   The staff is recommending that the District be dissolved, provided that annexation occurs.

4) Is the schedule as proposed on page 12 of this memo acceptable to the City Council?

   The staff recommends that this schedule be approved.

CITY OF BOULDER, COLORADO 80302

MEMORANDUM

TO: City Manager/City Council

FROM: Utilities Division D.G. Smith

SUBJECT: Boulder Valley Water and Sanitation District -- Possible Dissolution

DATE: August 3, 1978

In response to inquiries from the BVWSD concerning possible dissolution of the District and take-over by the City, I have prepared the following response. Dissolution of special districts is controlled by state statutes (CRS 32-1601) that specifically addresses that issue. Generally, the District Court must authorize an election after hearing sufficient evidence that dissolution should be considered. In our case the City would have to assure the Courts that sufficient monies would be escrowed to retire the outstanding bonded indebtedness of the District and that the City would assume all services the District was providing.

In our specific instance the city would make as a condition of annexation the dissolution of the District and guarantee the funds in escrow to provide for this action. If the annexation was successful, the City would petition the Court for an election for dissolution providing sufficient monies for the retirement of their bonded indebtedness ($302,370 as of 10/1/78). After the election for dissolution the Court would stipulate the schedule for the actual dissolution and arrange for the future employment of any District employees. The mill levy (currently 5.0 mills) would be eliminated and the City would assume all duties and responsibilities of the District. The Water and Sewer Utilities have sufficient monies in their respective fund balances to escrow the money for the outstanding bonded indebtedness.

DGS/pjf
cc: Andy Hollar

The Boulder County Housing Authority (BCHA) believes it is important to be clear and transparent about development processes and proposals, and the sign at Twin Lakes is one of the ways we are working to accomplish this. We have also been requested by neighbors to communicate about what we are doing and when. It's common practice for BCHA to inform area neighbors about activities specific to our development processes, such as hydrology studies, wildlife studies, and our plans and proposals for our properties, including target densities. We have done so at Josephine Commons and Aspinwall in Lafayette and Kestrel in Louisville. In addition, the informational sign placed on BCHA Twin Lakes property is not related to the Boulder Valley Comprehensive Plan process, which the Twin Lakes Stakeholder Group facilitated meetings are meant to help inform. The sign is directly connected to our work within the development process, which is propelled by a desire to build up to 12 units per acre of affordable housing on our property and the Boulder Valley School District (BVSD) property to the south.

Thank you,

Norrie Boyd
Boulder County
303-441-1506

7/13/16

The Twin Lakes Action Group (TLAG) agrees with BCHA that it is important to be clear and transparent with local communities affected by their development processes and proposals. While we appreciate and have no problem with the information conveyed on the sign regarding the hydrological study underway, we do not appreciate the statement on the sign regarding BCHA's intent to build at up to 12 units per acre. The last paragraph of the sign is clearly inappropriate at this time, and could be considered commercial – not informational - which is prohibited in residential areas by Article 13 of the Land Use Code.

While BCHA says this is common practice to post information such as this on their properties, this is an uncommon situation and they know that. TLAG, along with BCHA and BVSD, are in the midst of facilitated discussions mandated by a Boulder City Council motion, and those talks are not yet complete. The most important issue that is being discussed in the talks centers around density, and that number has not been agreed upon, nor has it been finalized in any way officially. To post an official-looking public sign that implies 12 will be the number of units built at Twin Lakes is premature. It is for this reason TLAG respectfully disagrees that the informational sign is not related to the facilitated discussions.

In addition, the BVCP process and the development process are the same: the land use designation determines what type of development can occur. To claim they are separate is fallacious, since BCHA is lobbying very hard for a land-use designation change.

The BCHA process for Twin Lakes is not on a common course; it has taken another path through good-faith-based facilitated discussions, and we kindly ask that that be acknowledged and respected.

Thank you,

Susan Lambert
Twin Lakes Action Group

On June 22, 2016 at 10:39:08 AM, georgehouse@comcast.net (georgehouse@comcast.net) wrote:

Heather,

Below is an e-mail I just sent to Frank Alexander and Ian Swallow of Boulder County Housing Authority and Glen Segrue of Boulder Valley School District.

Donna George

From: georgehouse@comcast.net
To: "Ian Swallow" <iswallow@bouldercounty.org>, "falexander" <falexander@bouldercounty.org>, "glen segrue" <glen.segrue@bvsd.org>
Sent: Wednesday, June 22, 2016 10:34:49 AM
Subject: Mowing of Twin Lakes Fields

Dear Frank, Ian, and Glen,

I recently learned that the meadows on Twin Lakes Road in Gunbarrel will be mowed sometime next week. This is a reversal of BCHA/BVSD's commitment to put mowing on hold until their wildlife study is complete. The wildlife biologist had wanted to assess late-blooming flowers later in the summer season. Information on the contract for the study states:

6. Additional Site Surveys (Geo-Tech/Seasonal T & E Species Surveys)

FHU Staff have included additional field surveys in Task 6 to conduct surveys of the project parcels for T & E species that have specific blooming periods that occur later than the initial site survey. The Ute ladies'-tresses orchid and the Colorado butterfly plant are both considered federally threatened species and bloom in late July to mid-August. This task generally includes:

a. A field visit to survey and coordinate with the contractor conducting Geo-Technical studies.

b. Two additional field surveys to monitor the site for Ute ladies'-tresses orchid and the Colorado butterfly plant to confirm presence/absence during the blooming season.

Also a recent BCHA e-mail update stated:

Biologists from Felsburg, Holt, and Ullevig are working to document the wildlife and habitat currently present on the two properties. They will combine this information with other existing publicly-available data on the parcels to produce a Wildlife Habitat Assessment Report, which will also include information gleaned from additional studies conducted later this summer during the blooming season for plants that are endangered, listed as special status species, or are of potential local concern.

My question is: How can these studies be completed if the fields are mowed? How will you assess the late blooming plants?

In addition, a complete and thorough wildlife study should, as a minimum, span at least a full year to cover all seasons, conditions, and migratory species. Maintaining the meadows in their most natural state possible is critical to conducting an accurate and thorough study.

Sincerely,

Donna George

Dear Twin Lakes Stakeholder Group (TLSG),

I sent a letter earlier to the TLSG concerning the first action of the council motion which states: "Jointly formulate recommendations for areas of expertise and selection of experts to inform the desired land use patterns for the area. The areas for study should include the suitability for urban development, desired land use patterns, and environmental constraints." The letter I sent is in the packet for the May 25th meeting. In this letter I noted that this first step has not been completed. Boulder County Housing Authority personnel have noted that the hydrology studies and wildlife studies presently being conducted are for informing any development on these properties and not for informing the land use change process. Deb Gardner, Boulder County Commissioner, stated during the April 19th Board of County Commissioner's business meeting that facilitation staff would be able to get additional expertise for the land use process. This has not been done. Where have Twin Lakes Action Group (TLAG), Boulder Valley School District (BVSD), and Boulder County Housing Authority (BCHA) jointly formulated recommendations for areas of expertise and selection of experts to inform the desired land use patterns for the area?

Most of the recommendations given by TLAG concerning the hydrologic and wildlife studies on these properties are not being conducted by the companies selected by BCHA to do the studies. When I recently talked to Norrie Boyd about why there were only three wells drilled on each of the North and South fields she reassured me that these wells were for determining the flow of ground water over the fields and that once they got data from these wells they would drill additional wells where the buildings will go to get more detailed information for the sites. There are no wells drilled on the eastern and southeast corner of the North field where there was recent flooding and the water table appears to be quite high. There was only mention of drilling wells in regard to how to proceed with development on the site and not in regard to how development would impact surrounding homes, wetlands, and wildlife. And that is one reason why there is a major flaw in this facilitated process.

When TLAG agreed to participate in these facilitated talks, land use change #36 requesting Open Space designation for these properties was to be fully investigated and considered. However, it appears that that is not the case since there are no studies being undertaken to investigate this option. Remember, the hydrology and wildlife studies presently being conducted on these properties are for informing BCHA of any constraints or mitigation needed for development on these properties. In fact, they jeopardized their own wildlife study by mowing the North field. They were going to mow the South field also but had to stop due to finding a meadowlark nest on the property. The only wildlife and hydrology studies informing the Open Space value of these properties is from information garnered from the neighboring citizens.

In addition, there have not been any other studies done such as traffic and recreation concerns for the Gunbarrel community. In contrast, the CU South site is receiving studies conducted by Biohabitats and Fox Tuttle paid for by the City of Boulder to inform the land use of that site. If these studies conclude that development can proceed on the CU site, then CU will conduct studies, similar to the ones that BCHA is currently conducting on the Twin Lakes site, which will inform the development process. Shouldn't the same process be in place for the Twin Lakes site? Shouldn't thorough, accurate, unbiased

studies be conducted on the Twin Lakes sites to adequately inform the staff, public, and governing bodies of the best use of these parcels for the Gunbarrel community and the corresponding appropriate land use designation.

Why has the TLSG facilitated process totally skipped over the first step outlined in the City Council motion of "jointly formulating recommendations for areas of expertise and selection of experts to inform the desired land use patterns for the area?" The facilitated process has totally skipped over this step and proceeded to step 2,"Jointly recommend the appropriate range of potential housing units with consideration given to intensity and community benefit, regardless of who holds title to the property", which addresses density on the site. How can you proceed to this second step when you have not formulated and completed the studies required in step #1 that are needed to inform step #2? This is a broken process. My thoughts on this are that there is a predetermined outcome of development on these properties and not a genuine consideration of the Open Space land use change requests that TLAG and many citizens put in for these properties in the 2015 Boulder Valley Comprehensive Plan Update.

The city and county staff and government are taking their time in studying and planning the CU South and BCH sites. Studies and planning of the Twin Lakes site should not be railroaded through. They should be given adequate time and investigation into what the best use of these fields is for the Gunbarrel community.

Sincerely,

Donna George

To whom it may concern:
I am strongly, fervently, emphatically opposed to any development in the North and South Fields in the Twin Lakes Neighborhood.

One evening, during a walk by the fields taken shortly after we first moved here two years ago (from Downtown Boulder), my husband looked around in awe and said, " I had no idea." I looked at him and said, " No idea about what?" He looked at me very pleased and surprised, "I had no idea this was a Nature Preserve!"

And it's true. This is what these gorgeous, alive, vibrant fields are. They are a bountiful Nature Preserve that deserves to be protected. They serve as a very important wildlife corridor that is home to countless wildfire.

It is an absolute travesty that anyone would choose to pave over this green open space.

I really believe that BCHA and BVSD have absolutely no idea what they are doing here. They have no understanding about our beautiful neighborhood and don't care at all what happens to it. This is NOT OK. What has happened to Boulder???

And of course not only are our fields threatened, but any development will essentially ruin the feel, safety, and peace of our neighborhood. This area simply CANNOT support many more residents. Traffic troubles, water and flooding issues, noise and light pollution, even crossing the street on one of Twin Lakes Rd's many blind curves will prove disastrous.

Gunbarrel's Chautauqua must remain preserved. And we will do everything we can to meet that end.

Think about the people who live here. The animals who live here. Not what BCHA and BVSD think should happen. If they still are hell bent on building then they really have no idea whatsoever what it's like to LOVE their land, their neighborhood so much that they will do anything it takes to halt development. They have no idea what it's like to care about habitat conservation and wildlife preservation. Wake up BCHA/BVSD and get out of Twin Lakes!!!!!

Thank you
Melanie Whitehead

OPEN SPACE FOR TWIN LAKES!
--
"Nature does not hurry, yet everything is accomplished." **~Lao Tzu**
If you have a moment consider supporting Twin Lakes in protecting our beloved Owls and other abundant wildlife in their natural habitat.
http://boulderowlpreserve.org
http://www.ipetitions.com/petition/no-leap-frog-annexation-and-densification-in
www.tlag.org