

WILLIAM P. RING **COCONINO COUNTY ATTORNEY** 2 Brian Y. Furuya (State Bar No. 025486) **Deputy County Attorney** 3 110 E. Cherry Ave. Flagstaff, Arizona 86001 T: (928) 679-8200 F: (928) 214-6115 bfuruya@coconino.az.gov Attorneys for Coconino County Flood Control District 6 7 IN THE SUPERIOR COURT OF THE STATE OF ARIZONA 8 IN AND FOR THE COUNTY OF COCONINO Case No. CV 20180000110 9 COCONINO COUNTY FLOOD CONTROL DISTRICT, a political COCONINO COUNTY ATTORNEY 110 E. CHERRY AVENUE FLAGSTAFF, ARIZONA 86001-4627 (928) 679-8200 subdivision of the State of Arizona, VERIFIED COMPLAINT 11 Plaintiff, 12 v. (Injunctive Relief Requested) (Assigned to Hon. Cathleen Nichols 13 TOWN OF TUSAYAN, an Arizona municipal corporation, 14 Defendant. 15 Plaintiff Coconino County Flood Control District, a political subdivision of the State 16 of Arizona, alleges as follows: 18 **Jurisdiction and Venue** 19 1. The Court has jurisdiction to consider Plaintiff's Complaint and grant the 20 l requested relief pursuant to A.R.S. §§ 12-122, 12-123, and 12-1801 et seq. 21

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2. Venue in Coconino County is proper pursuant to A.R.S. § 12-401 because the parcel that is the subject of this action is located in Coconino County, and the Defendant has caused an event or events to occur in Coconino County which gives rise to this action.

### The Parties

- 3. Plaintiff Coconino County Flood Control District (the "Plaintiff" or the "District"), is a duly organized political subdivision of the State of Arizona, with authority to institute this action for floodplain regulation and enforcement. A.R.S. §§ 48-3603(A), (B), (C)(12), (C)(22); 48-3609(B); and 48-3614.
- 4. Defendant Town of Tusayan (the "Defendant" or the "Town"), is a duly incorporated municipal corporation of the State of Arizona, with jurisdictional boundaries wholly within Coconino County, Arizona.

# FACTS APPLICABLE TO ALL CLAIMS The Subject Property

- 5. The Town owns that certain parcel of real property (the "Subject Property"), known generally as Coconino County Assessor's Parcel No. 502-14-001B, and which is more precisely defined by the legal description attached hereto as "Exhibit A," incorporated herein by this reference as if set forth in full.
- 6. Upon information and belief, the Subject Property is situated approximately 2.5 miles southeast of the Town, and comprises approximately 20.07 acres of land originally associated with the "Ten X Ranch," and which Subject Property was annexed within the

corporate boundary limits of the Town on or about October 18, 2012 by the Town's Ordinance No. 2011-11-02-01.

- 7. The Subject Property, by virtue of its location and the topography of the surrounding area, is upstream from the Town.
- 8. Portions of the Subject Property contains, and is encumbered by, a Federal Emergency Management Agency ("FEMA") Zone A Special Flood Hazard Area, per Flood Insurance Rate Map 04005C3850G.
- 9. Upon information and belief, the boundaries of the Subject Property contain a portion of the so-called "Coconino Wash" and a portion of at least one tributary to the Coconino Wash.
- 10. The Coconino Wash and its tributaries are "watercourses," as that term is specifically defined by A.R.S. § 48-3601(12).
- 11. Upon information and belief, those areas within the Subject Property that have been designated as Zone A Special Flood Hazard Area are within a "floodplain," as that term is specifically defined by A.R.S. § 48-3601(6).

# Statutes & Ordinance Applicable to the Subject Property Arizona State Revised Statutes Governing Floodplain Development

12. As applicable to the Subject Property with regard to any proposed development within the Floodplain and/or Watercourse delineated therein, Arizona statutes provide that "a person shall not engage in any development which will divert, retard or obstruct the flow of waters in any watercourse without securing written authorization from

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the board of the district in which the watercourse is located. Where the watercourse is a delineated floodplain no development shall take place in the floodplain without written authorization from the board of the district in which the floodplain is located." A.R.S. § 48-3613(A).

- A.R.S. § 48-3615(A) further provides that it is unlawful for a person to engage 13. in any development or to divert, retard or obstruct the flow of waters in a watercourse if it creates a hazard to life or property without securing the written authorization of a flood control district board; and where the watercourse is a delineated floodplain it is unlawful to engage in any development affecting the flow of waters without securing the required written authorization.
- Further, pursuant to A.R.S. § 48-3613(D), "a political subdivision . . . who 14. may be damaged . . . as a result of the unauthorized diversion, retardation or obstruction of a watercourse has the right to commence, maintain and prosecute any appropriate action or pursue any remedy to enjoin, abate or otherwise prevent any person from violating or continuing to violate [A.R.S. § 48-3613] or regulations adopted pursuant to [article 1 of Chapter 21 of Title 48, A.R.S.]."
- Statute also provides that if a person is found to be in violation of A.R.S. § 48-15. 3613, the court shall require the violator to either comply with this section if authorized by the board, or remove the obstruction and restore the watercourse to its original state. A.R.S. § 48-3613(D).

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- 16. Violations of the above-stated requirements are deemed to be a public nuisance per se and may be abated, prevented or retrained by action of the Plaintiff, per A.R.S. § 48-3614.
- 17. The court may also award such monetary damages as are appropriate to the injured parties resulting from the violation, including reasonable costs and attorney fees, pursuant to the same statute. <u>Id.</u>
- 18. Further, pursuant to A.R.S. § 48-3615(C), a person who violates any of the foregoing statutes or rules adopted pursuant thereto, such as the County's Floodplain Regulations discussed below, such a person may be assessed a civil penalty not to exceed the fine chargeable for a class 2 misdemeanor, with each day that the violation continues constituting a separate violation.

# County Floodplain Regulations

- 19. In addition to the above-referenced statutes, Plaintiff is also authorized and directed to adopt and enforce floodplain regulations, pursuant to A.R.S. §§ 48-3603(D) and 48-3609.
- 20. The floodplain regulations enforced by Plaintiff exists as Section 2.15B of the Coconino County Zoning Ordinance. See Coconino County Zoning Ordinance, Section

  2.15B: FPM—Floodplain Management Overlay Zone (the "County Floodplain Regulations"), at ¶ 1 et seq.

- 21. The County Floodplain Regulations have been in effect continuously since 1983, and have been amended thereafter from time to time, with the present version thereof being effective during all times relevant to this action.
- 22. The County Floodplain Regulations apply to all Special Flood Hazard Areas, as established by FEMA Flood Insurance Rate Maps, and all "development of land, construction of residential, commercial or industrial Structures or future development, or Uses of any kind conducted on land areas located within [the District's jurisdiction] shall be accomplished in complete conformance with the provisions of [the County Floodplain Regulations]." County Floodplain Regulations, at ¶¶ 2(a)–(c).
- 23. Further, any proposed "actions which may divert, retard or obstruct Flood waters or in any way threaten public health, safety or the general welfare *must first be* reviewed and approved by the County Engineer and may be initiated only after a finding has been made that serious detrimental impacts will not occur." County Floodplain Regulations, at ¶ 2(c) (emphasis added).
- 24. The County Floodplain Regulations additional specify that a "Floodplain Permit shall be obtained before grading or placing fill, installation of utilities, construction or development, including the installation of wastewater systems and the placement of Manufactured Homes, begins within any Special Flood Hazard Areas." County Floodplain Regulations, at ¶ 4(a).
- 25. The District may require that a hydrologic study which determines Base Flood Elevation be prepared by a Professional Engineer and be submitted by the property owner

prior to the submission of a development or Building Permit application. County Floodplain Regulations, at  $\P$  4(c)(3).

- 26. The County Floodplain Regulations specify that where proposed development activities are to take place within a Watercourse that is in a delineated Floodplain, "it is unlawful to excavate or build any Structure affecting the flow of waters without securing written authorization of the [District's] Board." County Floodplain Regulations, at ¶ 2(j).
- 27. "If a person is found to be in violation of [the County Floodplain Regulations], [a] court shall require the violator to either comply with [the County Floodplain Regulations] if authorized by the board or remove the obstruction and restore the watercourse to its original state." County Floodplain Regulations, at ¶ (2)(g)(4).
- 28. "Every new Structure, Building, fill, excavation or development located or maintained within any Special Flood Hazard Area after August 8, 1973 in violation of the [County Floodplain Regulations] is a public nuisance per se and may be abated, prevented or restrained by action of [the District]." <u>County Floodplain Regulations</u>, at ¶ (2)(h).

## Town's Development of the Subject Property

29. Upon information and belief, the Town caused the Subject Property to be subdivided by its recording of a final plat map for the "Ten X Ranch Phase I" subdivision on or about January 5, 2017 in the Official Records of Coconino County as Instrument Number 3773962.

	30.	Upon information and belief, at the time of the recording of the afore-	
referenced final plat map, the Town intended to develop the Subject Property to contain			
multip	ole unit	s of workforce housing.	
	31.	Upon information and belief, the Town still presently intends to develop the	

Subject Property to contain multiple units of workforce housing.

- 32. Upon information and belief, development of the Subject Property into workforce housing requires modification, excavation, fill, compaction, construction, and/or other alteration of the Watercourses and/or Floodplains situated within the boundaries of the Subject Property.
- 33. On or about April 16, 2018, Plaintiff discovered that the Town intended to break ground on its intended workforce housing development project at the Subject Property in Spring of 2018.
- 34. On or about April 16, 2018, Plaintiff's staff contacted the Town's manager to advise that it was aware that the Town intended to initiate a development project on the Subject Property within the Floodplain and/or Watercourses delineated in the Subject Property, and additionally advised that the Town that an approved floodplain use permit would be required prior to initiation of any construction activities on the Subject Property.
- 35. On or about April 21, 2018, the Town's manager asked to what project the District was referring by its April 16, 2018 email.
- 36. On or about April 23, 2018, the District provided the Assessor's Parcel Number designation for the Subject Property by email.

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- 37. The Town did not respond to the District's April 23, 2018 email.
- 38. On or about June 14, 2018, the District's staff again requested that the Town advise of the status of the suspected development project within the Floodplain and/or Watercourses at the Subject Property, but the Town did not respond to this request.
- Upon information and belief, the Town began construction of its workforce 39. housing project within the Floodplain and/or Watercourses at the Subject Property on or about July 24, 2018.
- 40. The Town did not inform the District that it had begun construction on the Subject Property.
- 41. On or about August 28, 2018, the Town passed its Ordinance 2018-01, by which the Town attempted to assert jurisdiction over administration of the floodplains within its corporate boundaries.
- 42. On or about September 26, 2018, the Town received a completed citizen referendum petition, with sufficient signatures to refer its Ordinance 2018-01 to a vote of the qualified electors of the Town.
- 43. On or about October 8, 2018, the District's staff learned that the Town had already accomplished very substantial clearing, excavations, grading, and other work at the Subject Property, and also that there was a dispute that prevented the Town from assuming the role of floodplain administration. Based upon this information, the District's staff sent an email to the Town that same day, requesting clarification concerning whether or not such work was within the Floodplain and/or Watercourses on the Subject Property.

	44.	On or about October 9, 2018, the Town's manager replied to the District via
email,	represe	enting that the Town was the floodplain administrator with regard to those
floodp	lains w	ithin the Subject Property.

- 45. Also on or about October 9, 2018, the Town's manager sent an email to the Arizona Department of Water Resources ("ADWR"), providing it a variety of planning documents and the Town's Ordinance 2018-01, and represented to ADWR that the Town had assumed jurisdiction over floodplain administration within its corporate territory.
- 46. In this October 9, 2018 email to ADWR, the Town did not disclose the completed referendum petition regarding its Ordinance 2018-01 that it had received on September 26, 2018.
  - 47. Likewise, the Town did not inform the District of the referendum.
- 48. On or about October 10, 2018, ADWR's staff sent an email to the District advising that it had reviewed the Town's Ordinance 2018-01, and based upon it, advised of its opinion that the Town was responsible for permitting and ensuring compliant development within the floodplains in the Town's corporate boundaries, which include those at the Subject Property.
- 49. On or about November 13, 2018, the District obtained various preliminary reports related primarily to the water and wastewater systems to support the workforce housing project on the Subject Property, and observed that these plans were vastly different from the final plat recorded by the Town.

	50.	Upon information and belief, on or about November 20, 2018, the Coconino
Coun	ty Reco	rder certified all signatures on the referendum petition regarding the Town's
Ordin	ance 20	018-01.

- 51. On or about December 7, 2018, the District's staff received a report from an independent engineer with Civiltec Engineering, Inc., ("Civiltec Report") evaluating the preliminary reports obtained by the District in November and other aspects of the development at the Subject Property. A true and correct copy of this Civiltec Report is attached hereto as "Exhibit B," and incorporated herein by this reference.
- 52. The Civiltec Report concludes that insufficient study and data are provided via the preliminary reports for the Town's project at the Subject Property to properly evaluate the effect of the project on the floodplain and/or develop proper flood control measures and flood resistant structures, and opines that the failure to provide sufficient analysis poses a risk to property and human life. <u>Civiltec Report</u>, at p. 6.

## **COUNT ONE - Abatement of Violation**

- 53. Plaintiff incorporates Paragraphs 1–52 as if specifically restated here.
- 54. At all times relevant to this case, the District has had jurisdiction to administer and regulate all floodplains within the corporate limits of the Town, as well as to enforce all floodplain statutes and regulations with regard to all development, alterations, construction, excavation, or modifications proposed or effectuated within the corporate limits of the Town.

	55.	No later than April 23, 2018, the 10wn knew or should have known that it was	
required to obtain a floodplain permit prior to initiating its development project at the			
Subjec	ct Prop	erty.	
	56.	However, the Town has not at any time relevant to this action applied to the	

- 56. However, the Town has not at any time relevant to this action applied to the District for a floodplain use permit, or otherwise sought written authorization form the District to perform any development or alterations within the Floodplains located within the Subject Property.
- 57. The District has not given any authorizations, written or otherwise, to the Town that would allow any work to proceed within the Floodplains and/or Watercourses located within the Subject Property.
- 58. Upon information and belief, despite its failure to apply for or receive written authorization therefor, the Town has actually performed very substantial construction, grading, excavation, filling, and other alterations within the Floodplains and/or Watercourses at the Subject Property.
- 59. Upon information and belief, the work done by the Town within the delineated Floodplains and/or Watercourses at the Subject Property have diverted, retarded, and/or obstructed the flow of waters therein.
- 60. The Town's failure to obtain proper data and perform adequate analysis of the hydrology of the Watercourses at the Subject Property, or of the impacts of the proposed development activities within the Floodplain and/or Watercourses at the Subject Property poses a serious public safety risk. *See* Civiltec Report, at p. 6.

	61.	The Town's development activities at the Subject Property are a violation of
the abo	ove-ref	erenced provisions of the Arizona Revised Statutes and the County Floodplain
Regula	ations,	and are a public nuisance per se, and may be abated, prevented or restrained by
the Di	strict.	See A.R.S. § 48-3614.

- 62. Upon information and belief, the Town will continue with its development activities at the Subject Property unless enjoined therefrom.
- 63. Plaintiff, pursuant to A.R.S. § 48-3614; and <u>County Floodplain Regulations</u>, at ¶ (2)(h), is entitled to abatement, prevention, and restraining of the public nuisance.
- 64. Further, A.R.S. § 48-3613(D) and County Floodplain Regulations, at ¶
  (2)(g)(4) also provide that the court shall require the Town to remove any obstructions and/or alterations, and restore the Watercourses at the Subject Property to its original state.

# COUNT TWO - Enjoin All Other Floodplain Activities by Town

- 65. Plaintiff incorporates those allegations contained in Paragraphs 1–64 above as if fully set forth herein.
- 66. Upon information and belief, the Town is performing other development within a floodplain on property located downstream to the northeast of the Town, and known as Coconino County Assessor's Parcel Number 502-16-006A.
- 67. Upon information and belief, the Town has purported, as "floodplain administrator," to approve the performance of other development within a floodplain on a parcel of property located downstream to the northeast of the Town, and known as

1	Coconino Co	ounty Assessor's Parcel Number 502-16-006A, and/or has assumed, and is
2	performing,	other duties, which are rightfully within the jurisdiction of the District.
3	68.	The violations described in Paragraphs 66-67 are unauthorized and constitute

a nuisance per se, and may additionally pose a danger to public safety.

69. The District, pursuant to A.R.S. § 48-3614 is entitled to injunctive relief to compel the Defendant to cease acting illegally as a floodplain administrator, while such jurisdiction remains with the District, and/or to cease all other development undertaken by the Town, by virtue of any purported authorizations obtained from the Town while acting in such capacity.

## **COUNT THREE – Civil Penalties**

- 70. Plaintiff incorporates those allegations contained in Paragraphs 1–69 above as if fully set forth herein.
- 71. A.R.S. § 48-3615(C) provides for civil monetary penalties to be assessed against a violator of the Arizona Flood Control District statutes in an amount not to exceed the fine chargeable for a class 2 misdemeanor per violation per day, with each day that such violation continues constituting a separate violation.
- 72. Pursuant to A.R.S. § 13-105(17), an "enterprise" "includes any corporation, association, labor union or other legal entity."
- 73. Pursuant to A.R.S. § 13-803(A), the maximum fine chargeable for a class 2 misdemeanor for imposition upon an "enterprise" is \$10,000.00 per violation, with a presumptive imposition of \$5,000.00 per violation.

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74.	The Town's development activities within the Floodplain and/or Watercourses
at the Subject	et Property constitute a violation of A.R.S. § 48-3615(A).

- For purposes of calculating these civil penalties, the Town, as a municipal 75. corporation of the State of Arizona, is an "enterprise" within the meaning of A.R.S. § 13-105(17).
- 76. A civil penalty should be imposed against the Town in an amount not to exceed the fine chargeable for a class 2 misdemeanor for each day that the Town has been in violation of A.R.S. § 48-3615, from the beginning of development at the Subject Property to that date at which the Town actually abates its violations, in an amount to be calculated at trial, but not less than \$720,000.00, calculated as the presumptive civil penalty of \$5,000.00, imposed for the 144 days between the assumed beginning of construction through the filing of this action.

WHEREFORE, Plaintiff Coconino County Flood Control District prays for relief as follows:

A. For an injunction pursuant to A.R.S. §§ 48-3613(D) and 48-3614, commanding the Defendant Town of Tusayan to immediately abate its violations of the above-cited Arizona Revised Statutes and the County Floodplain Regulations by removing all obstructions and restoring the Floodplain and/or Watercourses at the Subject Property to their original state, and further to refrain from any development at the Subject Property until such time as the Town applies for and obtains a valid floodplain use permit from the District, and further for an injunction commanding the Defendant

Town of Tusayan to cease any and all development of any kind within any Floodplain and/or Watercourse, until the Town obtains a floodplain use permit from the District.

- B. Upon failure of Defendant Town to abide by the injunctive remedies of Paragraph A above within 30 days' time, issue an affirmative injunction authorizing the Plaintiff District to enter the Subject Property (or any other property where a violation of Defendant is extant) and cause all obstructions in the Floodplains and/or Watercourses to be removed and to restore the same to their original condition, as nearly as possible, and to have the costs of abatement and restoration incurred by the Plaintiff be submitted to this Court to become a judgment against Defendant.
- C. For an injunction commanding the Defendant Town of Tusayan to cease any and all actions whereby the Town purports to act as floodplain administrator, until such time as the Town validly and finally assumes jurisdiction over the Floodplains within its corporate boundaries pursuant to A.R.S. § 3610.
- D. That the Court retain continuing jurisdiction over the case, so as to assure that its injunctive orders are obeyed and that the conduct prescribed and proscribed therein by the Court is fulfilled to completion.
- E. For monetary judgment against Defendant Town of Tusayan for civil penalties pursuant to A.R.S. § 48-3615(C), for its violations of A.R.S. § 48-3615(A) that have accrued by reason of its illegal work at the Subject Property, and for violations

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1 **VERIFICATION** (By Declaration pursuant to Rule 80(c), Ariz. R. Civ. P.) 2 3 STATE OF ARIZONA ) ss: County of Coconino 4 5 Christopher Tressler, verifies, declares, certifies, and states as follows: I am the County Engineer for Coconino County, and am further duly authorized to 6 act on behalf of Coconino County Flood Control District in such capacity regarding the foregoing action. 9 I am acquainted with the facts of this case, and have read the Verified Complaint of COCONINO COUNTY ATTORNEY 110 E. CHERRY AVENUE the Plaintiff. The allegations stated therein are true and accurate to the best of my knowledge, except as to those matters alleged therein upon information and belief, and as to (928) 679-8200 those matters, I believe them to be true. I declare and verify under penalty of perjury that the foregoing is true and correct. 13 14 EXECUTED on this 14 day of December, 2018. 15 16 17 18 19 20 21

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1 VERIFICATION (By Declaration pursuant to Rule 80(c), Ariz. R. Civ. P.) 2 3 STATE OF ARIZONA 4 County of Coconino 5 John Carr, verifies, declares, certifies, and states as follows: 6 I am a Drainage Engineer/Hydrologist for the Community Development Department 7 of Coconino County, duly authorized to act on behalf of Coconino County Flood Control 8 District in such capacity regarding the foregoing action. 9 I am acquainted with the facts of this case, and have read the Verified Complaint of WILLIAM P. RING COCONINO COUNTY ATTORNEY 110 E. CHERRY AVENUE FLAGSTAFF, ARIZONA 86001-462 the Plaintiff. The allegations stated therein are true and accurate to the best of my knowledge, except as to those matters alleged therein upon information and belief, and as to those matters, I believe them to be true. I declare and verify under penalty of perjury that the foregoing is true and correct. 13 EXECUTED on this 14th day of December, 2018. 14 15 16 17 18 19 20 21

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# EXHIBIT A

# **EXHIBIT** A

# EXHIBIT A TO SPECIAL WARRANTY DEED

### LEGAL DESCRIPTION

The South half of the Northeast quarter of the Southeast quarter of Section 29, Township 30 North, Range 3 East, Gila & Salt River Base and Meridian, Coconino County, Arizona, and more particularly described by metes and bounds as follows:

BEGINNING at the N-S 1/64 corner of said Section 29, being a BLM Brass cap;

THENCE along the North line of the South half of the Northeast quarter of the Southeast quarter of said Section 29, North 89° 41′ 51″ West, a distance of 1320.78 feet to a brass cap;

THENCE South 00° 16' 07" West, a distance of 662.42 feet to a brass cap;

THENCE South 89° 44' 17" East, a distance of 1321.19 feet;

THENCE North 00° 13′ 59" East, a distance of 661.49 feet to the POINT OF BEGINNING.

# EXHIBIT B

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# EXHIBIT B



Electrical/Controls Engineering • Construction Management • Surveying California • Arizona

December 7, 2018

Coconino County Dept. of Public Works Attn: Christopher Tressler, PE, County Engineer 5600 E. Commerce Flagstaff, AZ 86004

Sent Via Email: ctressler@coconino.az.gov

**Subject:** Tusayan Ten X Ranch Review

Dear Mr. Tressler:

Civiltec Engineering, Inc. (Civiltec) has completed our review of the documents provided by Coconino County regarding floodplain administration for the Ten X Ranch project located in the Town of Tusayan (Town).

### **BACKGROUND AND UNDERSTANDING**

The Town has initiated construction of the Ten X Ranch development. Ten X Ranch is located approximately 2.5 miles southeast of the Town. The project site is approximately 20 acres and is encumbered by a Federal Emergency Management Agency (FEMA) Zone A Special Flood Hazard Area (SFHA) per Flood Insurance Rate Map (FIRM) 04005C3850G. The Zone A SFHA includes Coconino Wash and a tributary to Coconino Wash.

The Town is located downstream of the development. The development will house temporary and seasonal workers from the Grand Canyon Village and includes 52 residential lots, a water and wastewater campus, and a wastewater lift station. To date, the Town has not obtained a Floodplain Use Permit from Coconino County. Coconino County serves as the Floodplain Administrator for the Town.

### **APPLIED STANDARDS AND GUIDELINES**

The Coconino County Zoning Ordinance Section 2.15.B FPM - Floodplain Management Overlay Zone establishes Coconino County's Floodplain Ordinance and the Floodplain Use Permit.

The purpose of the Floodplain Ordinance is to promote public health, safety and general welfare, and to minimize public and private losses due to flooding.

Coconino County Department of Public Works Tusayan Ten X Ranch Review December 7, 2018 Page 2 of 6



The Floodplain Ordinance applies to all SFHAs within the boundaries of Coconino County except those incorporated cities and towns that have adopted a resolution in accordance with ARS § 48-3610.

SFHAs identified by the Federal Insurance Administration (FIA) of FEMA in the Flood Insurance Study (FIS) for Coconino County, dated September 3, 2010 with accompanying FIRMs, dated September 3, 2010 and all subsequent amendments and/or revisions, are adopted by reference and declared to be a part of the Floodplain Ordinance. The FIS and attendant mapping are the minimum area of applicability of the Floodplain Ordinance and may be supplemented by studies for other areas that allow implementation of the Floodplain Ordinance as recommended to the Floodplain Board by the Floodplain Administrator. The Floodplain Board, within its area of jurisdiction shall delineate (or may by rule require developers of land to delineate) for areas where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with the criteria developed by the FEMA and the Director of Water Resources.

All development of land, construction of residential, commercial or industrial structures or future development, or uses of any kind conducted on land areas within the Floodplain Management Overlay Zone shall be accomplished in complete conformance with the provisions of the Floodplain Ordinance and other applicable regulations. Proposed actions that may divert, retard or obstruct flood waters or in any way threaten public health, safety or the general welfare must first be reviewed and approved by the County Engineer and may be initiated only after a finding has been made that serious detrimental impacts will not occur.

It is unlawful for any person to engage in any development or to divert, retard or obstruct the flow of waters in any watercourse when it creates a hazard to life or property without securing the written authorization from the Floodplain Board per ARS 48-3613. Where the watercourse is a delineated floodplain, it is unlawful to excavate or build any structure affecting the flow of waters without securing written authorization from the Floodplain Board. Every new structure, building, fill, excavation or development located or maintained within any SFHA after August 8, 1973 in violation of the Floodplain Ordinance is a public nuisance per se and may be abated, prevented or restrained by action of the Floodplain Board.

Per the Floodplain Ordinance, a Floodplain Permit shall be obtained before, grading or placing fill, installation of utilities, construction or development, including the installation of wastewater systems and the placement of manufactured homes begins within any SFHA.

### **TEN X RANCH REVIEW COMMENTS**

Documents reviewed include the following:

1. Final Plat of Ten X Ranch Phase 1, prepared by Alpha-Omega Engineering & Surveying, (Alpha-Omega) recorded by the Coconino County Recorder on 01/05/2017.

Coconino County Department of Public Works Tusayan Ten X Ranch Review December 7, 2018 Page 3 of 6



- 2. Drainage Report for Ten X Ranch, prepared by J2 Engineering and Environmental Design (J2) prepared for the Town of Tusayan in association with Westland Resources (Westland) signed 08/24/2018.
- 3. Grading Plans for Ten X Ranch, prepared by Westland, plan date 08/24/2018 and 09/13/2018.

### Comment 1

The Alpha-Omega Final Plat for Ten X Ranch Phase 1 has a different lot and street configuration than what is shown in the J2 Drainage Report and Westland Grading Plans. The Alpha-Omega Final Plat, J2 Drainage Report and Westland Grading Plans must all be based on the same lot and street configuration.

#### Comment 2

Both the J2 Drainage Report and Westland Grading Plans note that the floodplain, as depicted by the FIRM, does not accurately represent the existing (pre-grading) topography. Furthermore, the Westland Grading Plans state that a Letter of Map Revision (LOMR) will be filed with FEMA as part of the project to modify the floodplain limits and SFHA.

#### Comment 3

The J2 Drainage Report does not include any hydrologic calculations for Coconino Wash or the tributary to Coconino Wash, which impacts the property and development. The J2 Drainage Report utilizes a previous drainage study (by John F Olney Civil Engineering revised by CH2M Hill), which could not be obtained and is not included in the J2 Drainage Report. Per J2, the previous drainage study estimates a 100-year peak discharge of 1,240 cubic feet per second (cfs) for Coconino Wash.

The J2 Drainage Report mentions other previous drainage studies (Dubroy Engineering (Dubroy) for Grand Canyon Camper Village in 2009, Jacobs for the Arizona Department of Transportation (ADOT) State Route 64 in 2009 and Peak Engineering for the South Grand Canyon Sanitary District in 2012). The 100-year peak discharges for Coconino Wash vary widely between these studies (from approximately 1,200 to 8,000 cfs). The Jacobs and Peak Engineering studies include hydrologic modeling and produced similar results (approximately 7,000 to 8,000 cfs). The Dubroy study does not include hydrologic modeling. It also references the previous study utilized by J2 in the Ten X Ranch Drainage Report (by John F Olney Civil Engineering revised by CH2M Hill). Dubroy also could not obtain this study, but utilized the 100-year peak discharge of 1,240 cfs for Coconino Wash. The Dubroy study was approved by Coconino County in 2009.

It should be noted that previous studies indicate that standard hydrologic modeling techniques appear to overestimate the peak discharge estimates for Coconino Wash. The evidence for the overestimation is anecdotal primarily based on visual observations from local residents. The overestimation may be caused by deep layers of volcanic cinders and/or fractured limestone with high infiltration rates within the watershed. The J2 Drainage Report also mentions the presence

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of stock tanks in the watershed, which stores stormwater runoff as a potential cause for overestimation.

The J2 Drainage Report utilizes area weighted averages to determine the 100-year peak discharge estimates for Coconino Wash and the tributary to Coconino Wash at Ten X Ranch. The discharges used by J2 are 748 cfs and 262 cfs respectively.

#### Comment 4

There are two stock tanks located on the Ten X Ranch development site. The Ten X Tank is a larger tank located in the northeast portion of the site. Flows from the tributary to Coconino Wash drain into this tank. As this tank fills, stormwater spills over to a secondary depression just north of the property. Based on the topographic mapping on the Westland Grading Plans, it appears that when full the Ten X Tank and depression have a surface area of approximately 4 acres and a storage volume of 4 acre-feet. Per the Westland Grading Plans, the Ten X Tank and its associated stormwater storage is being removed as part of the Ten X Ranch development.

The second smaller tank is located in the western portion of the site. Flows from Coconino Wash drain into this tank. Based on the topographic mapping on the Westland Grading Plans, it appears that when full the smaller tank has a surface area of approximately 0.3 acres and a storage volume of 0.6 acre-feet. The smaller tank and its associated stormwater storage are not being removed as part of the Ten X Ranch development per the Westland Grading Plans. However, it is located approximately 200-feet downstream from the proposed 6, 10-foot by 3-foot concrete box culvert structure at the entrance road. Given the concentration and increased velocity of stormwater flows exiting the proposed box culvert structure and the proximity of the existing tank to the boxes, it is likely that the smaller tank will breach during a runoff event and its associated stormwater storage will be lost.

Since there is no hydrologic modeling included in the J2 Drainage Report, the effects of removing the two existing stock tanks in terms of the loss of stormwater storage and resulting potential for increased peak flow rates and higher water surface elevations downstream are unknown.

#### Comment 5

The J2 Drainage Report includes hydraulic modeling (HEC-RAS) for Coconino Wash and the tributary of Coconino Wash. Both washes are modeled in existing (pre-grading) condition and proposed (post-grading, developed) conditions. The report provides a comparison of water surface elevations and velocities between both conditions. The results of the modeling per the J2 Drainage Report show minor changes in water surface elevation and velocities between existing and proposed conditions. However, as discussed previously, the modeling is based on area weighted 100-year peak discharges from a previous drainage study that has not been provided in the J2 Drainage Report nor reviewed by the engineer authoring the J2 Drainage Report. Additionally, as mentioned the effects of removing the two existing stock tanks in terms of the loss of stormwater storage and resulting potential for increased peak flow rates and higher water surface elevations downstream are unknown.

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### **CONCLUSION AND RECOMMENDATIONS**

Per the Floodplain Ordinance, whenever a watercourse is to be altered or relocated, prior to any alteration of the watercourse the County Engineer is to review and require revision to all plans as necessary for proposed watercourse modifications for compliance with the Floodplain Ordinance. Therefore, we recommend that the County Engineer and Floodplain Administrator require the following.

1. In accordance with Volume 44 Code of Federal Regulations (CFR) Section 65.3, water surface elevations for the 100-year peak discharge (base flood elevations) may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, the Floodplain Administrator shall notify FEMA of the changes by submitting technical or scientific data. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements would be based upon current data.

Therefore, the Floodplain Administrator should require a Conditional Letter of Map Revision (CLOMR) followed by a LOMR. Per 44 CFR Section 65.8, a community, or an individual through the community, may request FEMA's comments on whether a proposed project, if built as proposed, would justify a map revision. In the case of the Ten X Ranch development, a map revision is justified. This is recognized in both the J2 Drainage Report and Westland Grading Plans. FEMA's comments will be issued in the form of a letter, termed a CLOMR, in accordance with 44 CFR Section 72. The data required to support such requests are the same as those required for final revisions (LOMR) under §§ 65.5, 65.6, and 65.7, except as-built certification is not required.

- 2. For the Zone A floodplain area impacting Ten X Ranch, no peak discharges have been established or accepted by FEMA. Therefore, the CLOMR submittal to the County Engineer, Floodplain Administrator and FEMA must include a hydrology study in compliance with FEMA requirements and guidelines. The results of the hydrology study, to be approved by FEMA, for the 100-year peak discharges for Coconino Wash and the tributary to Coconino Wash, will be used for the hydraulic (floodplain) modeling to determine water surface elevations throughout the project site. Minimum finished floor elevations for the development will be based on the FEMA approved hydrology and floodplain modeling. Construction and occupation of residential structures at Ten X Ranch without a hydrology study and subsequent floodplain delineation poses a risk to property and human life contrary to the purpose of the Floodplain Ordinance and Floodplain Use Permit.
- 3. In addition to the 100-year storm event, the hydrology study should include modeling of the 2-, 10-, 25- and 50-year storm events. The modeling should also include the impacts of the proposed development including the removal of the two existing stock tanks on-

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site in terms of increases in peak discharge exiting the site. It should also include impacts of increases in peak discharge exiting the site to the Town. Since no hydrologic modeling has been included in the J2 Drainage Report, impacts of the development immediately downstream and in the Town are unknown.

4. Increased peak discharges, water surface elevations, velocities and flooding downstream as a result of the development should not be allowed. The developer must demonstrate no adverse impacts downstream, including the Town. Again, failure to provide such analysis poses a risk to property and human life contrary to the purpose of the Floodplain Ordinance and Floodplain Use Permit.

Please let me know if you need any further assistance.

Sincerely,

**CIVILTEC Engineering, Inc.** 

Chris Dusza, PE, CFM

Vice President, Principal