U.S. Department
of Transportation
**Federal Aviation
Administration**

Office of the Chief Counsel

**800 Independence Ave., S.W.
Washington, D.C. 20591**

JUN - 7 2016

Ms. Ashley M. Bond
Duncan & Allen
1730 Rhode Island Avenue, NW
Washington, DC 20036

Re: Public aircraft status of Turlock Irrigation District to operate a UAS

Dear Ms. Bond,

Thank you for your letter of November 4, 2015, to Mark Bury requesting an interpretation of the public aircraft statute as it relates to the public entity status of a state power generating authority. Your request concerns your client, the Turlock Irrigation District (TID), a public power utility that you state is a political subdivision of the State of California under the California Water Code.

You state that TID's function is to provide safe, reliable, and low cost electric power and irrigation water to its customers. The TID was established under California's Wright Act of 1887. Your letter goes into considerable detail regarding several facets of the analysis you see as applicable to a finding that TID is engaged in a governmental function for the purpose of conducting public aircraft operations (PAO).

As you noted, the FAA has stated that the governmental function definition provided in 49 USC 40125(a)(2) is not exclusive by its own term (using the language 'such as'), and that we will consider reasonable expansions of functions that support the core functions of state and federal government entities. "Rather, the FAA has found that the list has at its base a description of the core functions of government entities, whether by state governments to operate the core functions as a state, or federal government entities to carry out their basic statutory authorizations." (Letter to Gregory Signer from Mark Bury, June 9, 2015).

Your letter raises numerous arguments that we are unable to find relevant, such as the requirements of Section 334 of the FAA Modernization and Reform Act of 2012 (FMRA), which does not change our analyses under the public aircraft statute. Similarly, historical actions regarding power generation in the United States are not relevant to determinations made under the public aircraft statute.

While we agree that your client meets the requirements of 49 USC 40102(a)(41)(C) as a valid government entity under the statutory definition, we are unable to conclude that a "public power utility" whose function is "providing safe, reliable and low-cost electric power" meets even an expanded test of governmental function under 49 USC 40125(a)(2) so as to support the use of an unmanned aircraft (UAS) in a PAO.

We have also concluded that the decisions of a state legislature cannot be used as the sole standard for findings made under a federal statute to determine status as a PAO. To do so would turn the authority to determine the limits of the statute enacted by Congress over to state legislatures, which would have no bounds and may have never considered the intent and restrictions inherent in PAO. As your client's circumstances demonstrate, it would even allow for determinations made 100 years ago on an unrelated topic to assess limits on aircraft. There is no evidence to conclude that Congress intended state legislatures to have such power when it enacted or amended the statute regarding PAO.

Congress limited the reach of the public aircraft statute to governmental functions, and the FAA has agreed that the language of the statute indicates that the list in §40125(a)(2) is not exclusive. But the FAA is aware that the list Congress did provide demonstrates that there are limits in those functions, which the FAA characterizes on the state level as those activities that are core functions necessary to operate as a state. That a state may choose to expand the reach of its own government to provide any number of services or goods for its residents is not at issue. But the actions of state legislatures to create entities such as public vendors of electrical power cannot be read to bind the terms of the public aircraft statute so as to allow any decision of a state legislature to be the basis for PAO. The statutory limits on operations have been shrinking historically, from the idea that anything operated by a government was PAO, to the much stricter, if uneven, addition of restrictions on governmental functions and commercial purpose.

We understand that when §40125 is read, an unfamiliar reader may conclude that only passengers are covered by the governmental function definition of §40125 (a)(3)[1]. Read across the statute, however, that would mean that flights without passengers[2] need not have any governmental function at all. We do not read the statute as knowingly making such a distinction; we understand the statute as presuming that each public aircraft flight itself needs an underlying governmental function, while the restriction on the status of passengers functions as an addition. That presumption is part of our basis for a rational expansion of the definition. Without the presumption, the statute serves little purpose other than to prohibit commercial operation as addressed in a separate paragraph. We do not read individual clauses of the statute in a vacuum from the others, but instead look to the overall impact of the provisions to effect the intent of Congress -- to allow states to use aircraft to conduct certain limited functions without the burden of federal regulation.

Our 2015 determination that the Tennessee Valley Authority has a governmental function turned on the fact that the TVA was chartered by Congress and thus occupies a different analytical position with respect to other laws enacted by Congress. We are unable to equate the actions of Congress in creating a federal entity with the actions of a state legislature when analyzing the scope of a federal statute.

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[1] This is based on where the term is used in the statute. It also appears in the section applicable only to the US military, 40125(c) (1)(B).

[2] Carrying only what we traditionally consider flightcrew, such as the pilot in command and second in command needed to operate the aircraft.

We appreciate that TID is a creation of the California state legislature and is required to be self-financed and not for profit. But the financial factors would only be considered if we were concluding that the flights would constitute a commercial purpose since they are described as being operated in support of a business. In fact, in our decision to the TVA, we found that the commercial purpose provision might well come into play "if the aircraft were used in support of a revenue-generating business that does not constitute a core function of a qualifying government entity."

We also understand the attraction to use UAS for activities such as your proposed inspection operations. As we noted in a previous interpretation[3], however, neither the novelty nor utility of UAS changes the statutory definition of public aircraft, and our analysis would be the same if the TID wanted to use a manned aircraft. Our decision on governmental function does not leave your client without ability to incorporate a UAS in its activities. Civil operation of UAS is currently approved as an exemption to certain civil regulations pursuant to Section 333 of FMRA, and your client is eligible to apply for such exemption as a civil entity. The exemption does not require status as a government entity, may be used for commercial or non-commercial purposes, and requires no assessment of the limits of a governmental function or commercial purpose under the public aircraft statute for any operation. Information on applying for an exemption may be found at https://www.faa.gov/uas/legislative_programs/section_333/how_to_file_a_petition/

This response was prepared by Karen Petronis, Senior Attorney on my staff. Please contact my office at 202-267-3073 if you have any further questions regarding this interpretation.

Sincerely,



Lorelei Peter
Assistant Chief Counsel for Regulations

[3] "Consideration of whether a UAS is easier, cheaper, or arguably safer than a manned aircraft in a given application does not factor into the analysis of whether the operation constitutes a valid public aircraft operation. Neither utility nor novelty alone create a governmental function to support the operation of a public aircraft." Memo to James Williams form Mark Bury, June 13, 2014.

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November 4, 2015

Mark W. Bury
Deputy Chief Counsel
International Law, Legislation, and Regulations Division
Office of the Chief Counsel
Federal Aviation Administration
800 Independence Avenue SW
Washington, D.C. 20591

Re: Request for Legal Interpretation in Relation to the Turlock Irrigation District's Public COA Application-- 2014-WSA-197-COA

Dear Mr. Bury:

The Turlock Irrigation District ("TID") has a pending application for a Public Certificate of Authorization or Waiver ("COA")—2014-WSA-197-COA. TID understands that its COA application remains pending because Federal Aviation Administration ("FAA") staff questions whether TID's proposed Unmanned Aircraft System ("UAS") operations satisfy the requirements of Section 334 of the FAA Modernization and Reform Act of 2012.

TID believes that its proposed operations satisfy all relevant statutory and regulatory requirements, and provides the attached memorandum in support of this position. TID requests that the FAA issue a legal interpretation confirming that TID's proposed UAS operations satisfy the requirements of Section 334 so that TID's COA application may proceed. If you have any questions, or need any additional information, please do not hesitate to contact me at (202) 289-8400, or amb@duncanallen.com.

Kindest regards,

Ashley M. Bond
Counsel to the Turlock Irrigation District

Enclosures

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November 4, 2015

MEMORANDUM

TO: Mark W. Bury, Deputy Chief Counsel
Karen L. Petronis, Senior Attorney for Regulations

FROM: Ashley Bond, Duncan & Allen
Ken Holmboe, Duncan & Allen

RE: Request for Legal Interpretation in Relation to the Turlock Irrigation District's Public COA Application-- 2014-WSA-197-COA

The Turlock Irrigation District ("TID") requests a legal interpretation confirming that TID's use of an unmanned aircraft system ("UAS") to inspect facilities related to the generation, transmission, and distribution of power, and the provision of irrigation water qualifies for operation under a Public Certificate of Waiver or Authorization ("Public COA") pursuant to Section 334 of the FAA Modernization and Reform Act of 2012 ("Reform Act").[1] TID's pending Public COA application (2014-WSA-197-COA) has been placed on hold over whether TID's proposed UAS operations satisfy the relevant statutory requirements. For the reasons discussed below, TID asserts its proposed UAS operations satisfy all relevant statutory requirements and requests confirmation from the Federal Aviation Administration ("FAA") so its Public COA may be approved.

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1 FAA Modernization and Reform Act of 2012, Pub. L. No. 112-095, 126 Stat. 11.

EXECUTIVE SUMMARY

TID is a public power utility[2] organized and operated under the laws of the State of California, and is a political subdivision of the State of California.[3] TID intends to conduct UAS operations to visually inspect vital energy and water infrastructure, such as electric power lines, irrigation canals, dams, generating facilities, and other electrical power related facilities. The inspection of these facilities is necessary for TID to carry out its core function of providing safe, reliable, and low cost electric power and irrigation water to its customers. Furthermore, many of these inspections are required by law to ensure the reliability and security of the national electric grid and the safety and structural integrity of TID's hydro assets.

For the reasons discussed below, a TID owned and operated UAS satisfies the definition of a Public Unmanned Aircraft System, as Congress defined the term in Section 331 of the Reform Act, because TID's inspections of its power and water related facilities are not done for a Commercial Purpose. Moreover, TID does not believe it is necessary to examine whether its proposed operations constitute the performance of a Governmental Function because, by definition, the UAS is unmanned and has no onboard crew members.[4] There is also no Armed Forces involvement in TID's proposed UAS operations.[5] However, assuming *arguendo* that the Governmental Function definition is relevant to TID's proposed operations, TID believes it can satisfy this definition. Therefore, TID believes its proposed UAS operations qualify for a Public COA under Section 334 of the Reform Act.

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2 The term Public Power refers to utilities that are owned and operated by the community they serve. This is distinct from investor-owned utilities, such as Potomac Electric Power Company-Pepco-that serves the Washington D.C. area. Investor-owned utilities are for profit-businesses owned by shareholders.

3 California Water Code §§ 20500-29978.

4 The definition of "Qualified Non-Crewmember" requires examination of whether a non-crewmember on board an aircraft is either a member of the armed forces, intelligence agency or whose presence is required for the performance of a "governmental function." 49 U.S.C. § 40125(a)(3).

5 Determining whether or not an aircraft is owned or operated by the Armed Forces includes an examination of whether or not the operation is performing a "governmental function." 49 U.S.C. § 40125(c)(1)(B).

Any communication in connection with this request for legal interpretation should be addressed to:

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OVERVIEW OF TID

A. TID is a Public Power Utility

TID was established in 1887 and was the first publically owned irrigation district in California. TID was established under the Wright Act of 1887[6] which recognized irrigation districts as political subdivisions and conferred upon them several governmental powers including the power to issue bonds, the power to tax[7], and the power to condemn property.[8] In 1923, TID began providing safe, affordable, and reliable electricity to its customers. Today, TID remains one of only four irrigation districts in California that provides retail electric energy directly to homes, farms and businesses.

TID supplies electric power and energy to approximately 100,000 electric customers, including residential, farm, business, industrial, and municipal customers. In addition, TID serves the vital function of supplying irrigation water to more than 5,800 irrigation customers. TID's service area encompasses a

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6 1887 Cal. Stat. 29.

7 *In re Madera Irrigation District*, 92 Cal. 296, 343 (1892) (Holding irrigation district had power to tax individuals who did not directly use the water).

8 *See Fallbrook Irrigation Dist. v. Bradley*, 164 U.S. 112, 159 (1986) (Finding irrigation districts have the power to condemn property), *Crall v. Board of Directors*, 87. Cal. 140, 144 (1890) (Holding an irrigation districts power to issue bonds under the Wright Act is constitutional).

662 square mile electric service territory and a 307 square mile irrigation service territory. TID has annual electric sales of approximately 2 million MWhs. TID provides reliable electric service to its customers through a diverse generating fleet, including renewable, hydroelectric, coal, and natural gas resources. TID has taken an active role in securing renewable resources to serve its customers, including the Tuolumne Wind Project, a 62 turbine, 136.6 MW wind farm located in Klickitat County, Washington.

As a public power system, TID is owned by its customers, not shareholders. Under California's tax laws, TID must largely self-finance[9] its operations and therefore charges its customers for the services it provides. While TID does charge its customers for the service it provides (as do all public power utilities) it operates on a not-for-profit basis, and its rates are based on the costs of providing service. This is a fundamental distinction between a public power utility like TID, and an investor owned utility like Pacific Gas & Electric Co., Pepco, or Dominion. By definition, TID has neither profit nor shareholders, and therefore has no obligation to pass profit along to shareholders like an investor owned utility does. This allows TID to provide reliable service to its customers at rates that are consistently lower than those charged by investor owned utilities. [10]

TID's provision of power and irrigation water to its customers is an inherently governmental activity. The State of California recognized this in enacting legislation such as the Wright Act and its Irrigation District legislation.[11] The federal government has also recognized this fact. In a 1932 campaign speech, then-Governor Franklin D. Roosevelt described the creation of a public utility as "an undeniable basic right" of community, saying:

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9 Stanislaus County, California officials collect a 1% property tax rate – limited under Proposition 13 (1978) – from its residents. TID receives a small portion of this tax revenue to support TID in its continued provision of reliable and economic electric power and irrigation water. TID is constitutionally prohibited from levying general taxes under Proposition 218 (1996).

10 *See Public Power Costs Less*, APPA (2015), http://appanet.files.cms-plus.com/PDFs/PublicPowerCostsLess1.pdf

11 Cal. Wat. Code §§ 22115-22124.

> I therefore lay down the following principle: That where a community—a city or county or a district—is not satisfied with the service rendered or the rates charged by a private utility, it has the undeniable basic right, as one of its functions of Government, one of its functions of home rule, to set up, after a fair referendum to its voters has been had, its own governmentally owned and operated service. [12]

In 1935, a few years after now-President Roosevelt's speech, Congress specifically exempted public power utilities from regulation under the Federal Power Act in recognition of the inherent differences between investor owned, for profit utilities and publically owned, non-profit utilities.[13] As a result there is strong recognition at both the state and federal level that providing safe, reliable and economical power is a core function of these governmental public power utilities.

B. TID's Use of UAS

Providing safe and reliable service requires continuous inspection of vital energy infrastructure (i.e. electric power lines), generating facilities (i.e. substations, hydropower assets, solar panels and wind turbines), and all other

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12 President Franklin D. Roosevelt, The Portland Speech (Sept. 21, 1932).

13 *See* 16 U.S.C. §824(f) (exempting "the United States, a State or any political subdivision of a State" from the jurisdiction of the Federal Power Act); State and municipal agencies are not subject to the obligations of the Federal Power Act. *See Garcia v. San Antonio Metropolitan Transit Authority*, 469 U.S. 528, 554 n.16 (1985); *Transmission Access Policy Study Group v. FERC*, 225 F.3d 667,697 (D.C. Cir. 2000). The legislative history behind the Federal Power Act clearly recognizes the distinction between for profit investor-owned utilities and publically-owned utilities:

> The CHAIRMAN: [Referring to the federal agencies] the reason why these things are not brought under [the Federal Power Commission] is that they are not operated for private profit.
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> Mr. DEVANE: That is correct, sir.

Hearings before the *House Committee on Interstate and Foreign Commerce and Public Utilities Companies*, 74th Cong., 1st Sess. P. 481.

related facilities. Currently, TID conducts these inspections through a combination of helicopter and ground inspections. Conducting these same inspections by UAS would: (1) allow for a closer examination of the facilities; (2) be more efficient by ensuring the correct tools and crew are deployed for any required repair; and (3) significantly reduce the cost of conducting these inspections by eliminating the need for helicopter operations. Since TID operates on a not-for-profit basis, the significant savings of replacing helicopter inspections with UAS operations will be passed along to TID's customers and thereby provide significant benefit to the public.

Moreover, the small size, agility, and low cost of UAS will allow TID to perform more frequent inspections. UAS operations will not only increase the accuracy and quality of the photography and video inspection than what is possible with a helicopter, but also increase safety because UAS operations carry neither crew nor combustible fuel. UAS operations will also reduce the necessity for inspections conducted by a bucket truck thereby avoiding the risks inherent with linemen being in close proximity to high-voltage equipment.

Furthermore, TID owns and operates five hydroelectric facilities. Two of these facilities are classified as high hazard potential,[14] meaning failure of either dam could result in a loss of life. Accurate periodic condition assessments are critical and required to prevent incidents and failures at high hazard classification facilities. The use of a UAS will make these inspections not only more feasible but allow TID to conduct inspections more often and accurately. Specifically, a UAS would reduce TID's reliance on binoculars and/or telephoto lenses, which do not allow for detailed inspection. The UAS would also be used to conduct inspections in areas that are either inaccessible or unsafe to access without extensive climbing apparatuses and training. Such areas include the abutment contact of a 110-foot high concrete gravity arch dam and the skin plate and structural arms of 30-foot high Tainter gates.

ANALYSIS

UAS owned and operated by TID for the purpose of inspecting facilities vital to the provision of safe and reliable electricity and irrigation water satisfy the definition of Public Unmanned Aircraft Systems. Specifically, a TID owned

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[14] The high hazard potential classification is based on the consequence of failure, and is not a reflection of the condition of the structure.

and operated UAS will not be used for Commercial Purposes and because there are no crewmembers[15] on the UAS and no Armed Forces involvement, there is no need to determine whether or not inspecting electric or water facilities constitutes a Governmental Function. Assuming *arguendo* that it is necessary to satisfy the Governmental Function definition, Section C below illustrates why the inspection of electric and water facilities is properly included in that definition.

A. A TID Owned and Operated UAS Satisfies the Definition of Public UAS

The FAA Modernization and Reform Act of 2012[16] defines Public Unmanned Aircraft Systems ("Public UAS") as:

> an unmanned aircraft system that meets the qualifications and conditions required for operation of a public aircraft (as defined in section 40102 of title 49, United States Code).[17]

Title 49 USC § 40102(a)(41), in turn, establishes five categories of aircraft that qualify as Public Aircraft. TID is a political subdivisions of the State of California, and therefore can satisfy § 40102(a)(41)(C),[18] which establishes that Public Aircraft includes:

> An aircraft owned and operated by a government of a State, the District of Columbia, or a territory or possession of the United

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15 The FAA regulations define Crewmember as "a person assigned to perform duty *in* an aircraft during flight time." 14 C.F.R. § 1.1 (emphasis added). Since UAS have no persons *in* the aircraft, they have no crewmembers.

16 FAA Modernization and Reform Act of 2012, Pub. L. No. 112-095, 126 Stat. 11.

17 FAA Modernization and Reform Act of 2012, Pub. L. No. 112-095, 126 Stat. 11, Section 331 (4).

18 TID could also satisfy subparagraph (D) which discusses aircrafts leased by political subdivisions of a government. Since TID has already purchased the UAS it proposes to use, this document focuses on ownership of a UAS, and not the lease of a UAS. 49 USC § 40102(a)(41)(D).

> States or a political subdivision of one of these governments except as provided in section 40125(b).

As a result, any UAS owned by TID is a Public UAS, so long as it does not violate Section 40125(b).

49 U.S.C. § 40125(b) establishes that any aircraft that would otherwise satisfy the definition of a Public Aircraft loses its Public Aircraft status "when the aircraft is used for commercial purposes or to carry an individual other than a crewmember or a qualified non-crewmember."[19] As a threshold matter, UAS are, by definition, unmanned. The FAA recognizes that statutory provisions regarding crewmembers and qualified non-crewmembers are not applicable to the UAS analysis.[20] As a result, the critical question is whether a UAS is being used for Commercial Purposes. As explained in Section B, the inspections of TID's power and water facilities are *not* conducted for Commercial Purposes.

B. TID's Inspection of Electric and Water Facilities is Not Conducted For Commercial Purposes

49 U.S.C. Section 40102 (a)(1) defines Commercial Purposes as "the transportation of persons or property for compensation or hire."[21] Therefore any

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19 49 U.S.C. §40125(b).

20 Letter from Karen L. Petronis, FAA Senior Attorney, to James Williams, UAS Integration Officer, *UAS Operations by Public Universities for Aeronautical Research Legal Interpretation*, at 1 (June 13, 2014) ("2014 FAA Education Interpretation").

21 Only the relevant portion of the definition is discussed in this whitepaper. The full definition of Commercial Purposes is:

> COMMERCIAL PURPOSES.—The term "commercial purposes" means the transportation of persons or property for compensation or hire, but does not include the operation of an aircraft by the armed forces for reimbursement when that reimbursement is required by any Federal statute, regulation, or directive, in effect on November 1, 1999, or by one government on behalf of another government under a cost reimbursement agreement if the government on whose behalf the operation is conducted certifies to the Administrator of the Federal Aviation Administration that the operation is necessary to respond to a significant and imminent threat to life or property

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flight that transports neither persons nor property cannot be a flight conducted for Commercial Purposes.[22] Here, UAS by definition, do not transport persons. Further, TID's proposed UAS operations would not transport any property and would be limited to surveying and inspecting power-related facilities using equipment that is entirely integrated into the UAS itself. Since there is no transportation of persons or property, there is no need to investigate whether or not the inspection of power-related facilities is being done for compensation or hire.[23] Therefore, TID's UAS operations would not be conducted for Commercial Purposes.

Even assuming *arguendo* that TID's UAS operations included the transportation of property, "a government aircraft that transports property is [still] a public aircraft unless it transports that property 'for commercial purposes.'"[24] The Federal Aviation Act and the FAA's regulations do not define "for compensation or hire" in the context of Public Aircraft operations. However, the definition of a Commercial Operator explains that:

> Where it is doubtful that an operation is for "compensation or hire", the test applied is whether the carriage by air is merely incidental to the person's other business or is, in itself, a major enterprise for profit.[25]

(including natural resources) and that no service by a private operator is reasonable available to meet the threat.

22 THE AVIATION AND REFORM ACT FOR THE 21ST CENTURY, H.R. REP. NO. 106-167, at 88-89 (1999) (Explaining an aircraft used for a "commercial purpose" must either "transport[]...property for commercial purposes" or "the government agency receives payment for carrying people in the aircraft.").

23 Furthermore, it is clear from the Congressional record that members of Congress were primarily concerned with "the safety of passengers on public use aircraft." _____ CONG. REC. 28312 (Oct. 6, 1994) (statement of Sen. Larry Pressler).

24 THE AVIATION AND REFORM ACT FOR THE 21ST CENTURY, H.R. REP. NO. 106-167, at 88 (1999).

25 14 C.F.R. § 1.1.

As analyzed by the Office of the Chief Counsel, the Commercial Purposes definition is triggered only if a governmental entity uses its UAS "in support of a revenue-generating business that does not constitute a core function of a qualifying government entity."[26] If the governmental entity uses its UAS in a manner supportive of that entity's core function, the UAS flights qualify for a Section 334 Public COA.[27] Morever, as the Office of the Chief Counsel recognizes, "a government entity may conduct a public aircraft operation using a UAS for the purpose of conducting a mandatory code inspection."[28]

Here, providing affordable and reliable electric and irrigation water service is not only TID' core function, it is its only function.[29] Surveying and inspecting power and water related facilities owned by TID is necessary to carry out this purpose. Beyond a doubt, inspecting power and water related facilities goes to the core function of qualifying governmental entities like TID, is "incidental" to the provision of electric power, and is not done for compensation or hire as the FAA defines those terms. Moreover, inspecting these facilities is required by the North American Electric Reliability Corporation's ("NERC") mandatory reliability standards.[30] Additionally, because two of TID's

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26 Letter from Mark W. Bury, FAA Assistant Chief Counsel, to Gregory R. Singer, Tennessee Valley Authority Associate General Counsel, at 2 (June 9, 2015) ("2015 Tennessee Valley Authority Legal Interpretation").

27 *See* 2014 Education Interpretation, at 2 (allowing public universities to fund aeronautical research with the tuition of participating students and grant money so long as the university maintains ownership over the research).

28 2015 Tennessee Valley Authority Legal Interpretation, at 2.

29 As discussed in Section C, TID does not believe an analysis of whether the UAS is performing a Governmental Function needs to be conducted. However, in the alternative, TID does provide an analysis of why its proposed operations perform a governmental function.

30 The Energy Policy Act of 2005 authorized the Federal Energy Regulatory Commission (FERC) to designate a national Electric Reliability Organization (ERO) to establish mandatory reliability requirements for planning and operating the North American bulk power system. On July 20, 2006, FERC issued an order certifying NERC as the ERO for the United States. *Order Certifying NERC as the ERO & Ordering Compliance Filing*, 116 FERC ¶ 61,062 (2006).

hydroelectric facilities are classified as high hazard potential, routine inspection of these facilities is required to ensure their structural stability and prevent loss of life. [31]

TID's inspections of its power and water related facilities are therefore mandatory inspections. As a result, the survey and inspection of these facilities is not done for Commercial Purposes. TID owned UAS inspecting power-related facilities satisfy the definition of a Public UAS and should be regulated accordingly.

C. The Governmental Function Test is Not Applicable, but TID's Proposed UAS Operations Satisfy the Definition

Determining whether or not TID's UAS can satisfy the definition of a Public UAS does not require consideration of whether or not the UAS is performing a Governmental Function. The Governmental Function definition is only triggered by the existence of a Qualified Non-Crew Member[32] on board the aircraft or when an aircraft is owned or operated by the Armed Forces. [33] As

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31 *See* 18 C.F.R. Part 12 (identifying the maintenance and inspection requirements for hydroelectric facilities).

32 49 U.S.C. § 40125(a)(3) states (emphasis added):

> (3) QUALIFIED NON-CREWMEMBER. The term "qualified non-crewmember" means an individual, other than a member of the crew, aboard an aircraft-
>
> (A) operated by the armed forces or an intelligence agency of the United State Government; or
>
> (B) whose presence is required to perform, or is associated with the performance of, *a governmental function.*

33 49 U.S.C. § 40125(c) states, in relevant part (emphasis added):

> (c) Aircraft Owned or Operated by the Armed Forces.
>
> (1) IN GENERAL.—Subject to paragraph (2), an aircraft described in section 40102(E) qualifies as a public aircraft if— ...

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explained by the Congressional Committee on Transportation and Infrastructure:

> "As a general rule, the Pressler amendment limited the class of public aircraft by excluding aircraft that carry passengers....However....if the passengers were *on board the aircraft* to carry out a government function... then the aircraft would still be a public aircraft."[34]

Furthermore, the 2014 FAA circular on public aircraft follows this exact legal structure. The circular's decisional flow chart for Public Aircraft does not include a factor regarding whether the aircraft's operation is a governmental function, but instead examines whether a Non-Qualified Crewmember is aboard.[35] By definition, TID's UAS is unmanned, and as discussed above it will be owned and operated by TID, a political subdivision of the State of California. Therefore, there are no concerns about Non-Qualified Crewmembers or the Armed Forces, and it is unnecessary to determine whether inspecting power and water related facilities satisfies the definition of a Governmental Function.

However, assuming *arguendo*, the Governmental Function definition has any relevance, TID's proposed UAS operations satisfy the definition. 49 U.S.C. Section 40125(a)(2) defines Governmental Function as an:

> activity undertaken by a government, such as national defense, intelligence missions, firefighting, search and rescue, law enforcement (including transport of prisoners, detainees, and illegal aliens), aeronautical research, or biological or geological resource management.[36]

> (B) the aircraft is operated in the performance of *a governmental function* under Titles 14, 31, 32, or 50 and the aircraft is not used for commercial purposes...

34 THE AVIATION AND REFORM ACT FOR THE 21ST CENTURY, H.R. REP. NO. 106-167, at 88-89 (1999).

35 Federal Aviation Administration, Advisory Circular 00-1.1A, *Public Aircraft Operations*, at 11 (Feb. 12, 2014).

36 49 U.S.C. § 40125(a)(2).

The FAA recognizes this is not an exhaustive list of activities, "[r]ather, the FAA has found that the list has at its base a description of the core functions of government entities to carry out their basic statutory authorizations."[37] Providing electricity is the sole purpose for establishing a public power utility, and as President Roosevelt and Congress recognized, it is a core function of government.[38]

Inspecting and maintaining power and water related facilities would also fall within the FAA recognized "public works function."[39] The electric sector is the only critical sector in the U.S., other than nuclear, to have mandatory standards. Specifically, inspecting electrical power lines to ensure reliability is required under NERC Standard FAC-001-1. Further, multiple federal agencies consider the reliability of the electrical grid a matter of critical importance to the economy[40], to national security[41], and to public health, safety and welfare.[42]

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37 2015 Tennessee Valley Authority Legal Interpretation, at 2.

38 President Franklin D. Roosevelt, The Portland Speech (Sept. 21, 1932).

39 2015 Tennessee Valley Authority Legal Interpretation, at 2.

40 Kristina Hamachi LaCommare & Joseph H. Eto, Ernest Orlando Lawrence Berkeley National Laboratory, "Understanding the Cost of Power Interruptions to U.S. Electricity Customers" (Sept. 2004)(developing an economic model which estimated that power outages cost the U.S. economy about $80 billion annually).

41 Defense Science Board, Office of the Undersecretary of Defense, "Report of the Defense Science Board Task Force on DoD Energy Strategy" 20 (Feb. 2008)(stating that certain defense-related activities that "must function 24/7" are wholly dependent on continued power to the buildings and equipment involved); U.S. Dept. of Homeland Security, "What is Critical Infrastructure?," http://www.dhs.gov/what-critical-infrastructure (last visited Aug. 3, 2015) (citing electric power delivery to homes as part of the "critical infrastructure [that] is the backbone of our nation's economy, security, and health").

42 Mary Casey-Lockyer et alia, "Deaths Associated with Hurricane Sandy — October–November 2012" Morbidity and Mortality Weekly Report (May 24, 2013) Vol. 62, No. 20 (indicating that at least 6 deaths in the aftermath of Hurricane Sandy were indirectly related to "burn/electric current" and that several factors, including power outages led to "challenging, and sometimes deadly, conditions for residents."); and G. Brooke Anderson & Michelle L. Bell, "Lights Out: Impact of the August 2003 Power Outage on Mortality in New

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Therefore, for these reasons, TID's proposed UAS operations meet the Governmental Function standard.

CONCLUSION

TID requests confirmation that its use of a UAS to inspect facilities related to the generation, transmission, and distribution of power and the distribution of irrigation water qualifies for operation under a Public COA. As discussed above, the proposed operations would not be for a Commercial Purpose and it does not need to be determined whether the proposed operations constitute a Governmental Function because no crew members are onboard the UAS, and there is no Armed Forces involvement. However, should the FAA determine that the Governmental Function definition remains relevant, then TID believes the FAA should find the proposed operations satisfy the definition. Therefore, for the reasons set forth above, TID believes its proposed UAS operations qualify for a Public COA under Section 334.

York" Toxicology, Vol. 23, No. 2 (2012)(finding 90 deaths directly attributable to the August 2003 power outage in the city of New York).