

The Texas Animal Health Commission proposes amendments to §40.6, concerning CWD Movement Restriction Zones. The proposed amendments are intended to replace Executive Director Order Declaring a Chronic Wasting Disease High Risk Area Containment Zone for Portion of Val Verde County dated December 20, 2019 (*Texas Register*, 45 TexReg 425), and to establish surveillance and containment zones in response to CWD confirmations in Kimble, Medina and Val Verde counties.

#### BACKGROUND:

Chronic Wasting Disease (CWD) is a transmissible spongiform encephalopathy (TSE). CWD is a progressive, fatal, degenerative neurological disease of farmed and free-ranging deer, elk, and moose. TSEs include a number of different diseases affecting animals or humans including bovine spongiform encephalopathy (BSE) in cattle, scrapie in sheep and goats, and Creutzfeldt-Jacob disease (CJD) in humans. Although CWD shares certain features with other TSEs, it is a distinct disease affecting only deer, elk, and moose. The species known to be susceptible to CWD are North American elk or wapiti, red deer, mule deer, sika deer, black-tailed deer, and white-tailed deer and their associated subspecies and hybrids.

The agent that causes CWD and other TSEs has not been completely characterized; however, the theory supported by most scientists is that TSE diseases are caused by proteins called prions. The exact mechanism of transmission is unclear; however, evidence suggests CWD is transmitted directly from one animal to another through saliva, feces, and urine containing abnormal prions shed in those body fluids and tissues. Because the disease has a long incubation period, animals infected with CWD may not show any visible signs of the disease for a number of months to years after they become infected. The disease can be passed through contaminated environmental conditions and has been known to persist for a long period of time.

Clinical signs of CWD may include weight loss, salivation, incoordination, behavior changes, and pneumonia. CWD primarily affects the nervous system in cervids but accumulation of the prion also occurs in other body systems including the lymphatic system. Therefore, the official tests (i.e. ELISA and IHC) designated by USDA target the identification of prions in the nervous and lymphatic systems. Presently, the only confirmatory diagnostic test for CWD is the Immunohistochemistry (IHC) test performed on the obex tissue of the brain and specific lymphoid tissues. There is no known treatment or vaccine for CWD.

The commission works in coordination and collaboration with the Texas Parks and Wildlife Department (TPWD) to address CWD issues and concerns. All mule deer, white-tailed deer, and native species are under the jurisdiction of TPWD. They are classified as property of the state of Texas and TPWD manages them as a resource of the state. TPWD through specific statutory authorization does allow for individuals to breed, trade, sell, and move white-tailed or mule deer that meet certain legal requirements.

Elk, sika deer, red deer, reindeer and moose are also classified as CWD susceptible species, but are not indigenous to the state and therefore, not subject to the jurisdiction of TPWD. They are classified as exotic livestock that are privately owned and are subject to the disease requirements of the commission. Texas has an unknown number of exotic cervid species that are free-ranging and also maintained on high fence premises. Many of these premises are hunting ranches, which are not subject to the seasonal and regulatory hunting restrictions of TPWD for non-native species.

The commission has engaged in several rulemakings over the years to address the threat posed by CWD, including rules to establish containment and surveillance zones in areas where CWD has been confirmed or is most likely to be detected. The purpose of the restriction zones is to both reduce the risk of CWD being spread from areas where it might exist and to increase detection of CWD by increased surveillance.

Section 40.6(c) sets forth requirements for animals within the Containment Zone (CZ). It provides that for movement from a CZ, no non-native CWD susceptible species may be transported outside the CZ unless from a herd with a certified status. This prevents unmonitored animals from being transported outside the zone and potentially posing a risk of exposing or spreading CWD to another part of the state. It also addresses that non-native CWD susceptible species may not be released within the CZ unless released to a high fence premises. It provides test requirements for these species, as well as carcass movement restrictions. Any escaped non-native CWD susceptible species which originated or resided in a CZ shall be captured and returned to the high fence premise of origin. Herd plans will have primacy for facilities within the zone and all non-native CWD susceptible species released in a CZ shall be officially identified.

Section 40.6(d) sets forth requirements for animals within the Surveillance Zone (SZ). It provides that prior to movement of a non-native CWD susceptible species, the premise of origin shall have an epidemiological risk assessment conducted by the commission. This will allow the agency to individually evaluate the risk of movement from a facility based on that facility's testing history, current status, and other epidemiological factors. It provides test requirements for these species, as well as carcass movement restrictions. Any escaped non-native CWD susceptible species which originated or resided in an SZ shall be captured and returned to the high fence premise of origin. Herd plans will have primacy for facilities within the zone and all non-native CWD susceptible species released in an SZ shall be officially identified.

Section 40.6(e) provides for Carcass Movement Restrictions, which states that no person shall transport or cause the transport of any part of a susceptible species from a property within a CZ or SZ unless it meets certain requirements.

In 2016, those rules were modified in response to additional CWD discoveries in the Texas Panhandle and Medina County, creating additional surveillance zones and an additional containment zone in West Texas.

On December 18, 2019, the commission received confirmation that a free ranging 5.5-year-old female white-tailed deer killed in Val Verde County tested positive for CWD. Accordingly, the Executive Director issued an order declaring a high risk containment zone for portions of Val Verde County on December 20, 2019. This proposed rulemaking would replace the Executive Order and establish a Containment Zone 4 in §40.6(b)(1)(D) and Surveillance Zone 4 in §40.6(b)(2)(D) for Val Verde County.

On January 28, 2020, the commission received confirmation that a 4.5-year-old male white-tailed deer and a 3.5-year-old female white-tailed deer killed in Medina County tested positive for CWD. The proposed amendment takes the location of these mortalities into consideration and establishes Containment Zone 3 boundaries in §40.6(b)(1)(C) for Medina and Uvalde counties. The proposed change to §40.6(b)(2)(C) extends the surveillance zone boundaries from F.M. 187 to the Sabinal River in Uvalde County.

On February 26, 2020, the commission received confirmation that a 5.5-year-old female white-tailed deer held in a deer breeding facility in Kimble County tested positive for CWD. The proposed amendment would establish Surveillance Zone 5 in Kimble County in §40.6(b)(2)(E). This proposal does not create a CZ in Kimble County for two reasons. First, the discovery occurred in a breeder deer facility, which is required by law to be designed and built to both prevent the free movement of deer and contact with free-ranging deer. Second, the facility where CWD was discovered is operating under a commission herd plan, which restricts deer movement and requires CWD testing at an equal or higher level to what is required in a CZ.

With respect to the containment zones that would be established by this rulemaking, commission staff worked collaboratively with the Texas Parks and Wildlife Department and together tailored the CZs and SZs proposed boundaries to, as much as possible, follow recognizable features such as roadways and power line rights-of-way, and county boundaries, and the commission notes that any designation of a CZ or SZ is accompanied by a public awareness effort.

#### FISCAL NOTE:

Ms. Myra Sines, Chief of Staff, has determined for the first five-year period the rules are in effect, there will be no significant additional fiscal implications for state or local government because of enforcing or administering the proposed rules, as commission personnel currently allocated to the administration and enforcement of regulatory diseases and activities will administer and enforce the rules as part of their current job duties and resources.

#### REGULATORY ANALYSIS:

**Public Benefit:** Ms. Sines has also determined that for each year of the first five years the rules are in effect, the public benefit anticipated because of enforcing or administering the rules will be the protection of CWD susceptible species by increasing the probability of detecting CWD in areas of the state where it is confirmed or likely to be detected and by reducing the inadvertent movement of the disease from these areas.

**Local Employment Impact Statement:** In accordance with Texas Government Code §2001.022, the Commission has determined that the proposed rules will not impact local economies and, therefore, did not file a request for a local employment impact statement with the Texas Workforce Commission.

**Major Environmental Rule:** The Commission has determined that Government Code, §2001.0225 (Regulatory Analysis of Major Environmental Rules), does not apply to the proposed rule because the specific intent of these rules is not primarily to protect the environment or reduce risks to human health from environmental exposure, and therefore, is not a major environmental rule.

**Takings Assessment:** The Commission has determined that the proposed governmental action will not affect private real property. The proposed amendments are an activity related to the handling of animals, including requirements for testing, movement, inspection, identification, reporting of disease, and treatment, in accordance with Title 4 TAC, §59.7, and are, therefore, compliant with the Private Real Property Preservation Act in Government Code, Chapter 2007. This rule does not authorize physical seizure or occupation of private real property. The regulation could affect activities occurring on private real property, if and only if, the owner/caretaker of such property is

located in a restriction zone, possesses CWD susceptible species, and requests to move the animals. Further, if someone wanted to take any susceptible species into the zones to be released, then similar limitations or restrictions would apply to those animals, but that is based on the animal and not the property. This rule does not diminish or destroy the right to exclude others or affect their ability to possess or dispose of their property. Any impacts resulting from the discovery of CWD in or near private real property would be the result of the discovery of disease and the rule has no negative effect on real property as it is focused on disease response and mitigation of risk.

**Economic Impact Statement:** Under the provisions of Government Code, Chapter 2006, a state agency must prepare an economic impact statement for a rule that may have an adverse economic effect on small businesses, micro-businesses or rural communities. The commission has determined that the animal agricultural industries meets the statutory definition of a small or microbusiness, and that the proposed rule may affect rural communities. The Commission also has determined that the rule as proposed will not result in adverse economic impacts to small and micro-businesses or rural communities because the rule applies to non-native CWD susceptible species located in geographic areas where CWD has been detected, or there is a high probability of detection. As such, the movement and testing requirements are intended to reduce exposure to other susceptible species in the same rural community, where the disease risk is greatest, and other communities and small businesses across the state. As a result, application of the rule will help prevent adverse economic impacts.

Although the commission does not believe there would be an adverse economic impact to those directly regulated by the commission, the commission considered the businesses that may be impacted and regulatory alternatives as part of its rule proposal process. The commission is not aware of any properties or businesses with non-native CWD susceptible species in proposed CZ 4, SZ 4 and SZ 5. The commission is aware of properties containing non-native CWD susceptible species in CZ 3 and SZ 3 proposals, however, the agency cannot determine the exact number of businesses that may be affected by the expanded zone. The premises known to be in CZ 4 are confirmed CWD positive facilities with testing and movement requirements that are equal to or more stringent than the zone testing and movement requirements proposed by these rules.

Alternatives for all zones, especially zone 3 where there are known non-native CWD susceptible species, included voluntary surveillance and alternative zone boundaries that followed more recognizable features. With the upcoming hunting season and the potential for increased animal movement from the affected zones, the commission determined that voluntary testing would not protect the health of other susceptible CWD species in the affected area and across the state. This is especially relevant for the zone 3 and 4 proposals, where CWD has been detected in free ranging deer.

The commission also considered alternatives to the proposed CZ 3, to follow more recognizable features such as roads. However, expanding the size of the zone to follow those recognizable features was overly burdensome. Furthermore, the commission determined that the regulated community would benefit from consistent zone boundaries for both native and non-native CWD susceptible species and, therefore, proposed zone boundaries consistent with those established by the Texas Parks and Wildlife Department.

**Regulatory Flexibility Analysis:** The commission has determined that because the proposed rules will not result in any direct economic effect on any small businesses, micro-businesses, or rural community, neither the economic impact statement nor the regulatory flexibility analysis described

in Government Code, Chapter 2006, is required.

Government Growth Impact Statement: In compliance with the requirements of Government Code, §2001.0221, the Commission has prepared the following Government Growth Impact Statement (GGIS). Except as provided below, the rule:

- (1) will not create a government program;
- (2) will not create new employee positions or eliminate existing employee positions;
- (3) will not require an increase or decrease in future legislative appropriations to the agency;
- (4) will not require an increase or decrease in fees paid to the agency;
- (5) will not create a new regulation;
- (6) will expand an existing rule by establishing new areas subject to the rules governing containment and surveillance zones, but will not otherwise limit, or repeal an existing regulation;
- (7) may increase the number of individuals subject to regulation by imposing movement, testing and identification requirements in an area where such restrictions are not currently in effect; and
- (8) will not adversely affect this state's economy.

Cost to Regulated Persons (Cost-in/Cost-out): The commission has determined that the rule as proposed is necessary to implement the legislative requirement that the commission protect exotic livestock from communicable disease. The proposed rules do not impose a direct cost on regulated persons, including a state agency, a special district, or a local government, within the state. Therefore, it is not necessary to repeal or amend any other existing rule.

#### REQUEST FOR COMMENT

Comments regarding the proposed amendments may be submitted to Amanda Bernhard, Texas Animal Health Commission, 2105 Kramer Lane, Austin, Texas 78758, by fax at (512) 719-0719 or by e-mail at [comments@tahc.texas.gov](mailto:comments@tahc.texas.gov). Comments must be received no later than thirty (30) days from the date of publication of this proposal.

#### STATUTORY AUTHORITY

The amendments are proposed under the following statutory authority as found in Chapter 161 of the Texas Agriculture Code. The commission is vested by statute, §161.041(a), with the requirement to protect all livestock, domestic animals, and domestic fowl from disease. The commission is authorized, through §161.041(b), to act to eradicate or control any disease or agent of transmission for any disease that affects livestock.

Pursuant to §161.046, entitled "Rules", the commission may adopt rules as necessary for the administration and enforcement of this chapter.

Pursuant to §161.048, entitled "Inspection of Shipment of Animals or Animal Products", the commission may require testing, vaccination, or another epidemiologically sound procedure before or after animals are moved. An agent of the commission is entitled to stop and inspect a shipment of animals or animal products being transported in this state in order to determine if the shipment

originated from a quarantined area or herd; or determine if the shipment presents a danger to the public health or livestock industry through insect infestation or through a communicable or non-communicable disease.

Pursuant to §161.054, entitled "Regulation of Movement of Animals", the commission, by rule, may regulate the movement of animals. The commission may restrict the intrastate movement of animals even though the movement of the animals is unrestricted in interstate or international commerce.

Pursuant to §161.0541, entitled "Elk Disease Surveillance Program", the commission by rule may establish a disease surveillance program for elk.

Pursuant to §161.0545, entitled "Movement of Animal Products", the commission may adopt rules that require the certification of persons who transport or dispose of inedible animal products, including carcasses, body parts, and waste material. The commission by rule may provide terms and conditions for the issuance, renewal, and revocation of a certification under this section.

Pursuant to §161.056(a), entitled "Animal Identification Program", the commission, in order to provide for disease control and enhance the ability to trace disease-infected animals or animals that have been exposed to disease, may develop and implement an animal identification program that is no more stringent than a federal animal disease traceability or other federal animal identification program. Section 161.056(d) authorizes the commission to by a two-thirds vote adopt rules to provide for an animal identification program more stringent than a federal program only for control of a specific animal disease or for animal emergency management.

Pursuant to §161.057, entitled "Classification of Areas", the commission by rule may prescribe criteria for classifying areas in the state for disease control. The criteria must be based on sound epidemiological principles. The commission may prescribe different control measures and procedures for areas with different classifications.

Pursuant to §161.061, entitled "Establishment", if the commission determines that a disease listed in §161.041 of this code or an agency of transmission of one of those diseases exists in a place in this state or among livestock, exotic livestock, domestic animals, domestic fowl, or exotic fowl, or that a place in this state or livestock, exotic livestock, domestic animals, domestic fowl, or exotic fowl are exposed to one of those diseases or an agency of transmission of one of those diseases, the commission shall establish a quarantine on the affected animals or on the affected place. The quarantine of an affected place may extend to any affected area, including a county, district, pasture, lot, ranch, farm, field, range, thoroughfare, building, stable, or stockyard pen.

Pursuant to §161.101, entitled "Duty to Report", a veterinarian, a veterinary diagnostic laboratory, or a person having care, custody, or control of an animal shall report the existence of the diseases, if required by the commission, among livestock, exotic livestock, bison, domestic fowl, or exotic fowl to the commission within 24 hours after diagnosis of the disease.

## STATUTORY AUTHORITY

No other statutes, articles or codes are affected by the proposal.

<rule>

§40.6. CWD Movement Restriction Zones.

(a) (No change.)

(b) Declaration of area restricted for CWD. CWD has been detected in susceptible species in different locations in Texas. This creates a high risk for CWD exposure or infection in susceptible species in these geographic areas. In order to protect other areas of the state from the risk of exposure and spread of CWD, restricted areas are created to protect against the spread of and exposure to CWD and have necessary surveillance to epidemiologically assess the risk. The high risk areas are delineated as follows:

(1) Containment Zone Boundaries: (A)- (B) (No change.)

(C) Containment Zone 3. That portion of the state lying within Bandera, Medina and Uvalde counties and depicted in the following figure and more specifically described by the following latitude-longitude coordinate pairs:

-99.29398096800, 29.63444908360; -99.29332773120, 29.63427752770;  
-99.29197515170, 29.63439690090; -99.28980120500, 29.63446380410;  
-99.28762690610, 29.63440631430; -99.28546157340, 29.63422467720;  
-99.28331448540, 29.63391967310; -99.28119484540, 29.63349260780;  
-99.27911173640, 29.63294531180; -99.27707408560, 29.63228013080;  
-99.27509062400, 29.63149991510; -99.27316985040, 29.63060800860;  
-99.27131999510, 29.62960823290; -99.26954898230, 29.62850487190;  
-99.26786439810, 29.62730265490; -99.26627345800, 29.62600673210;  
-99.26478297540, 29.62462265680; -99.26339933220, 29.62315635870;  
-99.26212845190, 29.62161412050; -99.26097577450, 29.62000254920;  
-99.25994623180, 29.61832854980; -99.25904422740, 29.61659929130;  
-99.25852031490, 29.61543045890; -99.25566836700, 29.60863858110;  
-99.25542530450, 29.60803948970; -99.25435713440, 29.60531221090;  
-99.24894385420, 29.59224370810; -99.24874612880, 29.59175258830;  
-99.24811052520, 29.58993518740; -99.24761230000, 29.58808534140;  
-99.24725358040, 29.58621097370; -99.24703589450, 29.58432011200;  
-99.24698172710, 29.58296158430; -99.24696016750, 29.58242085350;  
-99.24702671480, 29.58052133190; -99.24723524430, 29.57862968080;  
-99.24758485430, 29.57675399920; -99.24807404080, 29.57490231860;  
-99.24870070190, 29.57308256660; -99.24946214790, 29.57130253450;  
-99.25035511180, 29.56956984140; -99.25137576490, 29.56789190470;  
-99.25251973150, 29.56627590750; -99.25378211040, 29.56472876540;  
-99.25515749190, 29.56325710140; -99.25544657520, 29.56298607620;  
-99.25541168140, 29.56282967970; -99.25528159920, 29.56221391510;  
-99.25515857260, 29.56159705060; -99.25504261370, 29.56097914730;  
-99.25493373380, 29.56036026660; -99.25483194400, 29.55974046970;  
-99.25473725430, 29.55911981810; -99.25464967400, 29.55849837330;  
-99.25456921190, 29.55787619690; -99.25449587580, 29.55725335060;  
-99.25442967320, 29.55662989610; -99.25437061060, 29.55600589530;

-99.25431869370, 29.55538141000; -99.25427392780, 29.55475650200;  
-99.25423631720, 29.55413123350; -99.25420586590, 29.55350566630;  
-99.25418257660, 29.55287986240; -99.25416645190, 29.55225388400;  
-99.25415749310, 29.55162779310; -99.25415570130, 29.55100165170;  
-99.25416107670, 29.55037552200; -99.25417361860, 29.54974946600;  
-99.25419332580, 29.54912354580; -99.25422019650, 29.54849782350;  
-99.25425422780, 29.54787236100; -99.25429541650, 29.54724722050;  
-99.25434375860, 29.54662246390; -99.25439924900, 29.54599815320;  
-99.25446188240, 29.54537435030; -99.25453165260, 29.54475111700;  
-99.25460855260, 29.54412851520; -99.25469257490, 29.54350660650;  
-99.25478371110, 29.54288545280; -99.25488195210, 29.54226511550;  
-99.25498728810, 29.54164565620; -99.25509970890, 29.54102713630;  
-99.25521920320, 29.54040961720; -99.25534575920, 29.53979316020;  
-99.25547936430, 29.53917782620; -99.25562000520, 29.53856367650;  
-99.25576766810, 29.53795077200; -99.25592233830, 29.53733917330;  
-99.25608400050, 29.53672894120; -99.25625263850, 29.53612013620;  
-99.25642823580, 29.53551281870; -99.25661077490, 29.53490704890;  
-99.25680023760, 29.53430288690; -99.25699660530, 29.53370039280;  
-99.25719985840, 29.53309962610; -99.25740997680, 29.53250064660;  
-99.25762693970, 29.53190351360; -99.25785072550, 29.53130828640;  
-99.25808131200, 29.53071502410; -99.25831867650, 29.53012378540;  
-99.25856279530, 29.52953462910; -99.25881364420, 29.52894761370;  
-99.25907119850, 29.52836279720; -99.25933543240, 29.52778023790;  
-99.25960632000, 29.52719999340; -99.25988383420, 29.52662212140;  
-99.26016794750, 29.52604667910; -99.26045863190, 29.52547372370;  
-99.26075585840, 29.52490331210; -99.26105959770, 29.52433550080;  
-99.26136981950, 29.52377034620; -99.26168649320, 29.52320790430;  
-99.26200958730, 29.52264823110; -99.26233906980, 29.52209138190;  
-99.26267490810, 29.52153741210; -99.26301706870, 29.52098637660;  
-99.26336551790, 29.52043833020; -99.26372022100, 29.51989332720;  
-99.26408114290, 29.5193514217; -99.26444824790, 29.51881266750; -  
99.26482149930, 29.51827711800; -99.26520086050, 29.51774482640;  
-99.26558629360, 29.51721584560; -99.26597776040, 29.51669022800;  
-99.26637522220, 29.51616802580; -99.26677863960, 29.51564929090;  
-99.26718797250, 29.51513407470; -99.26760318030, 29.51462242830;  
-99.26802422190, 29.51411440260; -99.26845105560, 29.51361004800;  
-99.26888363900, 29.51310941440; -99.26932192920, 29.51261255180;  
-99.26976588280, 29.51211950920; -99.27021545570, 29.51163033580;  
-99.27067060340, 29.51114508000; -99.27113128080, 29.51066379000;  
-99.27159744210, 29.51018651370; -99.27206904120, 29.50971329830;  
-99.27254603130, 29.50924419080; -99.27302836510, 29.50877923790;  
-99.27351599480, 29.50831848570; -99.27400887190, 29.50786197980;  
-99.27433400540, 29.50756678400; -99.27378225350, 29.50740572490;  
-99.27310215530, 29.50720062110; -99.27242443680, 29.50698963390;  
-99.27174916710, 29.50677278350; -99.27107641080, 29.50655009190;  
-99.27040623640, 29.50632158070; -99.26973870920, 29.50608727270;  
-99.26907389590, 29.50584719130; -99.26841186290, 29.50560135910;  
-99.26775267480, 29.50534980190; -99.26709639820, 29.50509254470;

-99.26644309680, 29.50482961160; -99.26579283610, 29.50456102910;  
-99.26514568010, 29.50428682390; -99.26450169420, 29.50400702400;  
-99.26386094140, 29.50372165590; -99.26322348440, 29.50343074860;  
-99.26258938810, 29.50313433010; -99.26195871430, 29.50283243010;  
99.26133152510, 29.50252507910; -99.26070788430, 29.50221230660;  
-99.26008785290, 29.50189414480; -99.25947149110, 29.50157062390;  
-99.25885886180, 29.50124177610; -99.25825002520, 29.50090763500;  
-99.25764504140, 29.50056823240; -99.25704397070, 29.50022360280;  
-99.25644687330, 29.49987377970; -99.25585380660, 29.49951879760;  
-99.25526483090, 29.49915869290; -99.25468000440, 29.49879349950;  
-99.25409938390, 29.49842325540; -99.25352302850, 29.49804799580;  
-99.25295099500, 29.49766775830; -99.25238333980, 29.49728258100;  
-99.25182011960, 29.49689250140; -99.25126138930, 29.49649755780;  
-99.25070720520, 29.49609779080; -99.25015762150, 29.49569323860;  
-99.24961269370, 29.49528394190; -99.24907247580, 29.49486994040;  
-99.24853701980, 29.49445127640; -99.24800637980, 29.49402799030;  
-99.24748060950, 29.49360012450; -99.24695975920, 29.49316772100;  
-99.24644388120, 29.49273082360; -99.24593302740, 29.49228947370;  
-99.24542724720, 29.49184371730; -99.24492659200, 29.49139359660;  
-99.24443111020, 29.49093915690; -99.24394085210, 29.49048044350;  
-99.24345586530, 29.49001750170; -99.24297619830, 29.48955037680;  
-99.24250189870, 29.48907911560; -99.24203301420, 29.48860376500;  
-99.24156959060, 29.48812437110; -99.24111167270, 29.48764098230;  
-99.24065930820, 29.48715364620; -99.24021254020, 29.48666241060;  
-99.23977141360, 29.48616732520; -99.23933597250, 29.48566843790;  
-99.23890625990, 29.48516579870; -99.23848231810, 29.48465945740;  
-99.23806418930, 29.48414946410; -99.23765191480, 29.48363586950;  
-99.23724553510, 29.48311872380; -99.23684509140, 29.48259807830;  
-99.23645062330, 29.48207398550; -99.23606216940, 29.48154649690;  
-99.23567976840, 29.48101566400; -99.23530345800, 29.48048154010;  
-99.23493327670, 29.47994417810; -99.23456925970, 29.47940363050;  
-99.23421144290, 29.47885995200; -99.23385986390, 29.47831319650;  
-99.23351455530, 29.47776341620; -99.23317555180, 29.47721066750;  
-99.23284288870, 29.47665500510; -99.23251659740, 29.47609648280;  
-99.23219671010, 29.47553515700; -99.23188325920, 29.47497108300;  
-99.23157627540, 29.47440431650; -99.23127578900, 29.47383491360;  
-99.23098183070, 29.47326293140; -99.23069442920, 29.47268842530;  
-99.23041361230, 29.47211145330; -99.23013940880, 29.47153207240;  
-99.22987184580, 29.47095034030; -99.22961094900, 29.47036631340;  
-99.22935674470, 29.46978005110; -99.22910925810, 29.46919161040;  
-99.22886851420, 29.46860104990; -99.22863453640, 29.46800842820;  
-99.22840734800, 29.46741380410; -99.22818697160, 29.46681723680;  
-99.22797342860, 29.46621878420; -99.22776674070, 29.46561850740;  
-99.22756692860, 29.46501646410; -99.22737401090, 29.46441271530;  
-99.22718800850, 29.46380732040; -99.22700893840, 29.46320033880;  
-99.22683681950, 29.46259183160; -99.22667166700, 29.46198185890;  
-99.22651349980, 29.46137048010; -99.22636233140, 29.46075775790;  
-99.22621817790, 29.46014375070; -99.22608105370, 29.45952852120;

-99.22595097230, 29.45891212880; -99.22582794540, 29.45829463610;  
-99.22571198730, 29.45767610310; -99.22560310710, 29.45705659180;  
-99.22550131810, 29.45643616400; -99.22540662860, 29.45581487970;  
-99.22531904820, 29.45519280240; -99.22523858620, 29.45456999230;  
-99.22516525050, 29.45394651110; -99.22509904830, 29.45332242140;  
-99.22503998590, 29.45269778500; -99.22498806870, 29.45207266380;  
-99.22494330300, 29.45144711930; -99.22490569240, 29.45082121360;  
-99.22487524130, 29.45019500990; -99.22485195250, 29.44956856840;  
-99.22483582780, 29.44894195250; -99.22482686890, 29.44831522400;  
-99.22482507680, 29.44768844480; -99.22483045240, 29.44706167730;  
-99.22484299470, 29.44643498410; -99.22486270190, 29.44580842630;  
-99.22488957230, 29.44518206650; -99.22492360330, 29.44455596720;  
-99.22496479190, 29.44393019030; -99.22501313390, 29.44330479760;  
-99.22506862460, 29.44267985080; -99.22513125790, 29.44205541330;  
-99.22520102820, 29.44143154470; -99.22527792760, 29.44080830900;  
-99.22536194980, 29.44018576730; -99.22545308560, 29.43956398150;  
-99.22555132630, 29.43894301240; -99.22565666280, 29.43832292210;  
-99.22576908330, 29.43770377300; -99.22588857720, 29.43708562470;  
-99.22601513280, 29.43646854050; -99.22614873740, 29.43585257990;  
-99.22628937850, 29.43523780480; -99.22643704090, 29.43462427620;  
-99.22659171100, 29.43401205500; -99.22675337270, 29.43340120170;  
-99.22692200980, 29.43279177730; -99.22709760710, 29.43218384110;  
-99.22728014560, 29.43157745520; -99.22746960840, 29.43097267800;  
-99.22766597560, 29.43036957090; -99.22786922840, 29.42976819240;  
-99.22807934620, 29.42916860360; -99.22829630810, 29.42857086240;  
-99.22852009370, 29.42797502990; -99.22875067950, 29.42738116330;  
-99.22898804400, 29.42678932270; -99.22923216210, 29.42619956700;  
-99.22948301030, 29.42561195410; -99.22974056440, 29.42502654270;  
-99.23000479750, 29.42444339070; -99.23027568450, 29.42386255530;  
-99.23055319830, 29.42328409520; -99.23083731110, 29.42270806760;  
-99.23112799510, 29.42213452880; -99.23142522060, 29.42156353680;  
-99.23172895890, 29.42099514800; -99.23203918040, 29.42042941800;  
-99.23235585360, 29.41986640390; -99.23267894700, 29.41930616130;  
-99.23300842830, 29.41874874510; -99.23334426610, 29.41819421170;  
-99.23368642620, 29.41764261580; -99.23403487460, 29.41709401160;  
-99.23438957700, 29.41654845450; -99.23475049760, 29.41600599790;  
-99.23511760220, 29.41546669510; -99.23549085300, 29.41493060080;  
-99.23587021330, 29.41439776750; -99.23625564520, 29.41386824850;  
-99.23664711120, 29.41334209630; -99.23704457250, 29.41281936340;  
-99.23744798880, 29.41230010070; -99.23785732050, 29.41178435980;  
-99.23827252800, 29.41127219330; -99.23869356830, 29.41076365050;  
-99.23912040090, 29.41025878320; -99.23955298360, 29.40975764060;  
-99.23999127250, 29.40926027210; -99.24043522520, 29.40876672790;  
-99.24088479690, 29.40827705740; -99.24133994440, 29.40779130750;  
-99.24180062010, 29.40730952830; -99.24226678100, 29.40683176620;  
-99.24273837850, 29.40635806960; -99.24321536760, 29.40588848560;  
-99.24369770090, 29.40542305970; -99.24418532880, 29.40496183890;  
-99.24467820550, 29.40450486850; -99.24517627990, 29.40405219490;

-99.24567950340, 29.40360386180; -99.24618782760, 29.40315991410;  
-99.24670119940, 29.40272039630; -99.24721957040, 29.40228535230;  
-99.24774288740, 29.40185482450; -99.24827109850, 29.40142885510;  
-99.24880415330, 29.40100748820; -99.24934199700, 29.40059076430;  
-99.24988457660, 29.40017872500; -99.25043183920, 29.39977141190;  
-99.25098372980, 29.39936886420; -99.25154019380, 29.39897112260;  
-99.25210117630, 29.39857822710; -99.25266662160, 29.39819021600;  
-99.25323647320, 29.39780712710; -99.25381067440, 29.39742900030;  
-99.25438916960, 29.39705587160; -99.25497189930, 29.39668777950;  
-99.25555880810, 29.39632475840; -99.25614983660, 29.39596684680;  
-99.25674492630, 29.39561407830; -99.25734401800, 29.39526648910;  
-99.25794705340, 29.39492411270; -99.25855397030, 29.39458698450;  
-99.25916471140, 29.39425513670; -99.25977921370, 29.39392860290;  
-99.26039741800, 29.39360741520; -99.26101926220, 29.39329160590;  
-99.26164468540, 29.39298120630; -99.26227362450, 29.39267624700;  
-99.26290601760, 29.39237675760; -99.26354180190, 29.39208276970;  
-99.26418091450, 29.39179431060; -99.26482329240, 29.39151141010;  
-99.26546887110, 29.39123409570; -99.26611758750, 29.39096239480;  
-99.26676937620, 29.39069633570; -99.26742417330, 29.39043594330;  
-99.26808191420, 29.39018124370; -99.26874253330, 29.38993226340;  
-99.26940596420, 29.38968902520; -99.27007214300, 29.38945155490;  
-99.27074100230, 29.38921987610; -99.27141247580, 29.38899401000;  
-99.27208649690, 29.38877398160; -99.27276300000, 29.38855981060;  
-99.27344191600, 29.38835151890; -99.27412317920, 29.38814912760;  
-99.27480672240, 29.38795265720; -99.27549247550, 29.38776212570;  
-99.27618037290, 29.38757755340; -99.27687034530, 29.38739895770;  
-99.27756232460, 29.38722635730; -99.27825624160, 29.38705976880;  
-99.27895202880, 29.38689920840; -99.27964961540, 29.38674469210;  
-99.28034893390, 29.38659623620; -99.28104991340, 29.38645385490;  
-99.28175248650, 29.38631756220; -99.28245658140, 29.38618737140;  
-99.28316212880, 29.38606329600; -99.28386905970, 29.38594534770;  
-99.28457730380, 29.38583353900; -99.28528678950, 29.38572788010;  
-99.28599744840, 29.38562838200; -99.28670920850, 29.38553505490;  
-99.28742200090, 29.38544790750; -99.28813575260, 29.38536694900;  
-99.28885039460, 29.38529218670; -99.28956585490, 29.38522362900;  
-99.29028206450, 29.38516128160; -99.29099894950, 29.38510515140;  
-99.29171644190, 29.38505524400; -99.29243446780, 29.38501156400;  
-99.29315295810, 29.38497411620; -99.29387184020, 29.38494290440;  
-99.29459104380, 29.38491793040; -99.29531049720, 29.38489919780;  
-99.29603012840, 29.38488670920; -99.29674986650, 29.38488046380;  
-99.29746964140, 29.38488046380; -99.29818937960, 29.38488670930;  
-99.29890901080, 29.38489919800; -99.29962846410, 29.38491793050;  
-99.30034766770, 29.38494290470; -99.30106654970, 29.38497411640;  
-99.30178504010, 29.38501156430; -99.30250306600, 29.38505524440;  
-99.30322055840, 29.38510515180; -99.30393744340, 29.38516128210;  
-99.30465365290, 29.38522362960; -99.30536911330, 29.38529218720;  
-99.30608375520, 29.38536694970; -99.30679750700, 29.38544790810;  
-99.30751029940, 29.38553505570; -99.30822205950, 29.38562838280;

-99.30893271830, 29.38572788090; -99.30964220400, 29.38583353980;  
-99.31035044820, 29.38594534860; -99.31105737900, 29.38606329700;  
-99.31176292640, 29.38618737240; -99.31246702130, 29.38631756320;  
-99.31316959440, 29.38645385590; -99.31387057390, 29.38659623740;  
-99.31456989240, 29.38674469330; -99.31526747890, 29.38689920970;  
-99.31596326620, 29.38705977000; -99.31665718310, 29.38722635860;  
-99.31734916240, 29.38739895910; -99.31803913480, 29.38757755490;  
-99.31872703220, 29.38776212710; -99.31941278520, 29.38795265870;  
-99.32009632840, 29.38814912920; -99.32077759170, 29.38835152050;  
-99.32145650770, 29.38855981230; -99.32213301070, 29.38877398330;  
-99.32280703180, 29.38899401180; -99.32347850520, 29.38921987790;  
-99.32414736460, 29.38945155670; -99.32481354330, 29.38968902700;  
-99.32547697410, 29.38993226530; -99.32613759330, 29.39018124570;  
-99.32679533410, 29.39043594530; -99.32745013130, 29.39069633770;  
-99.32810191990, 29.39096239690; -99.32875063630, 29.39123409790;  
-99.32939621490, 29.39151141230; -99.33003859280, 29.39179431280;  
-99.33067770540, 29.39208277200; -99.33131348960, 29.39237675990;  
-99.33194588270, 29.39267624930; -99.33257482190, 29.39298120870;  
-99.33320024500, 29.39329160840; -99.33382208920, 29.39360741780;  
-99.33444029340, 29.39392860540; -99.33505479570, 29.39425513930;  
-99.33566553680, 29.39458698710; -99.33627245370, 29.39492411530;  
-99.33687548900, 29.39526649180; -99.33747458070, 29.39561408110;  
-99.33806967040, 29.39596684960; -99.33866069880, 29.39632476130;  
-99.33924760750, 29.39668778240; -99.33983033730, 29.39705587460;  
-99.34040883240, 29.39742900330; -99.34098303360, 29.39780713010;  
-99.34155288510, 29.39819021910; -99.34211833040, 29.39857823010;  
-99.34267931290, 29.39897112570; -99.34323577680, 29.39936886730;  
-99.34378766750, 29.39977141510; -99.34433493000, 29.40017872820;  
-99.34487750960, 29.40059076750; -99.34541535320, 29.40100749140;  
-99.34594840800, 29.40142885850; -99.34647661900, 29.40185482790;  
-99.34699993610, 29.40228535570; -99.34751830690, 29.40272039970;  
-99.34803167870, 29.40315991760; -99.34854000280, 29.40360386530;  
-99.34904322640, 29.40405219840; -99.34954130070, 29.40450487200;  
-99.34961401930, 29.40457229290; -99.35050123300, 29.40456670370;  
-99.35420483420, 29.40453969670; -99.35425017030, 29.40453939300;  
-99.35797484070, 29.40451658610; -99.35805686850, 29.40451617140;  
-99.36276132920, 29.40449740190; -99.36276136610, 29.40449740190;  
-99.36402646230, 29.40449232450; -99.36404470070, 29.40449225560;  
-99.36934056360, 29.40447342280; -99.36934759920, 29.40447360200;  
-99.36935478840, 29.40447337430; -99.37900433080, 29.40444214140;  
-99.38827919840, 29.40441146420; -99.39467281040, 29.40437673300;  
-99.39593697240, 29.40436982830; -99.39820120510, 29.40442516060;  
-99.40036187830, 29.40460498180; -99.40250450530, 29.40490812360;  
-99.40461991870, 29.40533328810; -99.40669906710, 29.40587865580;  
-99.40873305360, 29.40654189500; -99.41071317530, 29.40732016600;  
-99.41263095670, 29.40821013940; -99.41447819060, 29.40920800740;  
-99.41624697110, 29.41030949970; -99.41792972630, 29.41150990280;  
-99.41951925170, 29.41280407910; -99.42100874150, 29.41418649100;

-99.42116511300, 29.41434259960; -99.42277379040, 29.41596015990;  
-99.42282442660, 29.41601119390; -99.43579423700, 29.42911145320;  
-99.43579426300, 29.42911147900; -99.43616215450, 29.42948300350;  
-99.43733855460, 29.43074042980; -99.43809278170, 29.43165455740;  
-99.43975616110, 29.43167342530; -99.44177038920, 29.43168541780;  
-99.44520543740, 29.43170579960; -99.45056528900, 29.43170816580;  
-99.45528658420, 29.43169676660; -99.45528663350, 29.43169676660;  
-99.45564319100, 29.43169589820; -99.46025154270, 29.43162855960;  
-99.46284542930, 29.43167941060; -99.46500679060, 29.43185818520;  
-99.46715017930, 29.43216028800; -99.46926642370, 29.43258442620;  
-99.47134646950, 29.43312878550; -99.47338141630, 29.43379103640;  
-99.47536255580, 29.43456834530; -99.47728140980, 29.43545738600;  
-99.47912976570, 29.43645435510; -99.48089971230, 29.43755498560;  
-99.48258367290, 29.43875456770; -99.48417443800, 29.44004796820;  
-99.48566519710, 29.44142965260; -99.48704956530, 29.44289370630;  
-99.48832161260, 29.44443386370; -99.48947589080, 29.44604353360;  
-99.49050745280, 29.44771582580; -99.49141187730, 29.44944358210;  
-99.49218528510, 29.45121940600; -99.49282436080, 29.45303569640;  
-99.49332635890, 29.45488467620; -99.49368912360, 29.45675843090;  
-99.49391109450, 29.45864893720; -99.49399131300, 29.46054810040;  
-99.49399137410, 29.46078000060; -99.49394608330, 29.47131692420;  
-99.49303086010, 29.47170384800; -99.49182470320, 29.47240671630;  
-99.49122596360, 29.47291000460; -99.49052309490, 29.47370832400;  
-99.49017599950, 29.47419425760; -99.48970742120, 29.47513141520;  
-99.48950784070, 29.47578221900; -99.48936032570, 29.47644170060;  
-99.48930826110, 29.47748298720; -99.48936900240, 29.47897549740;  
-99.48945577690, 29.48037255690; -99.48986361360, 29.48144855270;  
-99.49006319320, 29.48186506680; -99.49023994020, 29.48220237920;  
-99.49038425640, 29.48261999990; -99.49058043490, 29.48297377290;  
-99.49144289720, 29.48520586050; -99.49146025260, 29.48596947110;  
-99.49128670440, 29.48640334020; -99.49041896610, 29.48783510870;  
-99.49008922520, 29.48818220450; -99.48940370650, 29.48854664950;  
-99.48933429290, 29.48862475060; -99.48929090600, 29.48885904040;  
-99.48930826060, 29.48905862010; -99.48942974420, 29.48943174770;  
-99.48958593690, 29.48976148850; -99.48972812400, 29.48998310990;  
-99.48988096780, 29.49014329380; -99.49044499830, 29.49046435680;  
-99.49091293690, 29.49055896840; -99.49123450310, 29.49062970300;  
-99.49160384980, 29.49071130170; -99.49188549760, 29.49079630390;  
-99.49224138230, 29.49090606270; -99.49254728100, 29.49100040490;  
-99.49295631430, 29.49112655560; -99.49326678820, 29.49122230900;  
-99.49348527550, 29.49129011330; -99.49365939680, 29.49136672700;  
-99.49382891480, 29.49144131530; -99.49380431280, 29.49535632120;  
-99.49374260930, 29.49697368970; -99.49353880480, 29.49886575410;  
-99.49319397040, 29.50074210490; -99.49270957640, 29.50259470700;  
-99.49216413460, 29.50419178730; -99.49220486760, 29.50986461730;  
-99.49227401340, 29.51322260310; -99.49231519930, 29.51419752850;  
-99.49225324960, 29.51609719550; -99.49204937970, 29.51798924970;  
-99.49170445440, 29.51986558990; -99.49121994180, 29.52171817900;

-99.49059791160, 29.52353908270; -99.48988360190, 29.52522907280;  
-99.48981720110, 29.52537233900; -99.48977461740, 29.52546376870;  
-99.48888609660, 29.52719807320; -99.48786974820, 29.52887783310;  
-99.48774308830, 29.52905763380; -99.48775192650, 29.52911160590;  
-99.48786113720, 29.52982938130; -99.48796217160, 29.53054807230;  
-99.48805501940, 29.53126760750; -99.48813967140, 29.53198791570;  
-99.48821611890, 29.53270892550; -99.48828435420, 29.53343056540;  
-99.48834437030, 29.53415276380; -99.48839616100, 29.53487544920;  
-99.48843972110, 29.53559854990; -99.48847504610, 29.53632199420;  
-99.48850213230, 29.53704571050; -99.48852097680, 29.53776962680;  
-99.48853157750, 29.53849367160; -99.48853393320, 29.53921777300;  
-99.48852804350, 29.53994185910; -99.48851390880, 29.54066585830;  
-99.48849153040, 29.54138969860; -99.48846091010, 29.54211330840;  
-99.48842205100, 29.54283661590; -99.48837495660, 29.54355954940;  
-99.48831963150, 29.54428203710; -99.48825608100, 29.54500400740;  
-99.48818431110, 29.54572538880; -99.48810432880, 29.54644610970;  
-99.48801614180, 29.54716609850; -99.48791975880, 29.54788528400;  
-99.48781518910, 29.54860359470; -99.48770244280, 29.54932095950;  
-99.48758153100, 29.55003730720; -99.48745246560, 29.55075256670;  
-99.48731525900, 29.55146666710; -99.48716992480, 29.55217953750;  
-99.48701647710, 29.55289110740; -99.48685493110, 29.55360130590;  
-99.48668530260, 29.55431006280; -99.48650760810, 29.55501730770;  
-99.48632186520, 29.55572297040; -99.48612809220, 29.55642698100;  
-99.48592630800, 29.55712926960; -99.48571653250, 29.55782976650;  
-99.48549878630, 29.55852840220; -99.48527309090, 29.55922510750;  
-99.48503946860, 29.55991981320; -99.48479794220, 29.56061245030;  
-99.48454853560, 29.56130295020; -99.48429127340, 29.56199124430;  
-99.48402618100, 29.56267726440; -99.48375328440, 29.56336094230;  
-99.48347261050, 29.56404221030; -99.48318418720, 29.56472100070;  
-99.48288804280, 29.56539724620; -99.48258420650, 29.56607087960;  
-99.48227270840, 29.56674183420; -99.48195357920, 29.56741004330;  
-99.48162685040, 29.56807544060; -99.48129255420, 29.56873796010;  
-99.48095072380, 29.56939753600; -99.48060139270, 29.57005410290;  
-99.48024459570, 29.57070759560; -99.47988036800, 29.57135794930;  
-99.47950874540, 29.57200509940; -99.47912976490, 29.57264898160;  
-99.47874346380, 29.57328953210; -99.47834988030, 29.57392668730;  
-99.47794905340, 29.57456038390; -99.47754102280, 29.57519055900;  
-99.47712582870, 29.57581715010; -99.47670351220, 29.57644009500;  
-99.47627411520, 29.57705933190; -99.47583768000, 29.57767479920;  
-99.47539425000, 29.57828643580; -99.47494386900, 29.57889418110;  
-99.47448658160, 29.57949797480; -99.47402243300, 29.58009775670;  
-99.47355146920, 29.58069346760; -99.47307373690, 29.58128504800;  
-99.47258928330, 29.58187243950; -99.47209815630, 29.58245558350;  
-99.47160040480, 29.58303442230; -99.47109607790, 29.58360889830;  
-99.47058522560, 29.58417895450; -99.47006789850, 29.58474453440;  
-99.46954414780, 29.58530558160; -99.46901402560, 29.58586204070;  
-99.46847758420, 29.58641385620; -99.46793487690, 29.58696097330;  
-99.46738595740, 29.58750333790; -99.46683088010, 29.58804089590;

-99.46626970010, 29.58857359410; -99.46570247300, 29.58910137940;  
-99.46512925500, 29.58962419960; -99.46455010290, 29.59014200260;  
-99.46396507420, 29.59065473710; -99.46337422680, 29.59116235210;  
-99.46277761930, 29.59166479730; -99.46217531100, 29.59216202260;  
-99.46156736150, 29.59265397880; -99.46095383120, 29.59314061690;  
-99.46033478080, 29.59362188870; -99.45971027180, 29.59409774630;  
-99.45908036620, 29.59456814250; -99.45844512630, 29.59503303050;  
-99.45780461530, 29.59549236430; -99.45715889660, 29.59594609800;  
-99.45650803440, 29.59639418670; -99.45585209320, 29.59683658590;  
-99.45519113810, 29.59727325160; -99.45452523470, 29.59770414040;  
-99.45385444900, 29.59812920960; -99.45317884770, 29.59854841690;  
-99.45249849780, 29.59896172060; -99.45181346670, 29.59936907980;  
-99.45112382250, 29.59977045400; -99.45042963370, 29.60016580310;  
-99.44973096910, 29.60055508810; -99.44902789810, 29.60093827020;  
-99.44832049050, 29.60131531140; -99.44760881650, 29.60168617410;  
-99.44689294680, 29.60205082160; -99.44617295240, 29.60240921770;  
-99.44544890480, 29.60276132660; -99.44472087590, 29.60310711350;  
-99.44398893800, 29.60344654390; -99.44325316380, 29.60377958420;  
-99.44251362630, 29.60410620120; -99.44177039890, 29.60442636260;  
-99.44102355550, 29.60474003650; -99.44027317030, 29.60504719170;  
-99.43951931770, 29.60534779770; -99.43876207260, 29.60564182460;  
-99.43800151030, 29.60592924330; -99.43723770620, 29.60621002520;  
-99.43647073620, 29.60648414230; -99.43570067660, 29.60675156750;  
-99.43492760370, 29.60701227410; -99.43415159440, 29.60726623630;  
-99.43337272580, 29.60751342880; -99.43259107520, 29.60775382700;  
-99.43180672020, 29.60798740720; -99.43101973890, 29.60821414590;  
-99.43023020930, 29.60843402080; -99.42943821000, 29.60864701000;  
-99.42864381950, 29.60885309230; -99.42784711680, 29.60905224720;  
-99.42704818110, 29.60924445500; -99.42624709170, 29.60942969660;  
-99.42544392820, 29.60960795340; -99.42463877050, 29.60977920790;  
-99.42383169840, 29.60994344300; -99.42302279230, 29.61010064230;  
-99.42221213250, 29.61025079030; -99.42139979940, 29.61039387210;  
-99.42058587390, 29.61052987340; -99.41977043680, 29.61065878060;  
-99.41895356920, 29.61078058110; -99.41813535210, 29.61089526270;  
-99.41731586700, 29.61100281390; -99.41649519520, 29.61110322410;  
-99.41567341830, 29.61119648340; -99.41485061790, 29.61128258240;  
-99.41402687590, 29.61136151270; -99.41320227400, 29.61143326630;  
-99.41237689420, 29.61149783610; -99.41155081860, 29.61155521570;  
-99.41072412920, 29.61160539940; -99.40989690810, 29.61164838220;  
-99.40906923760, 29.61168415990; -99.40824119990, 29.61171272890;  
-99.40741287730, 29.61173408630; -99.40658435220, 29.61174823000;  
-99.40575570680, 29.61175515870; -99.40492702350, 29.61175487160;  
-99.40409838460, 29.61174736880; -99.40326987260, 29.61173265100;  
-99.40244156970, 29.61171071960; -99.40161355820, 29.61168157690;  
-99.40078592050, 29.61164522570; -99.39995873870, 29.61160166970;  
-99.39913209510, 29.61155091320; -99.39830607180, 29.61149296130;  
-99.39748075090, 29.61142781960; -99.39665621450, 29.61135549470;  
-99.39583254430, 29.61127599370; -99.39500982240, 29.61118932460;  
-99.39418813040, 29.61109549590; -99.39336755010, 29.61099451710;

-99.39254816290, 29.61088639800; -99.39173005030, 29.61077114960;  
-99.39091329350, 29.61064878320; -99.39009797370, 29.61051931090;  
-99.38928417200, 29.61038274570; -99.38847196910, 29.61023910120;  
-99.38766144590, 29.61008839150; -99.38685268270, 29.60993063170;  
-99.38604576010, 29.60976583750; -99.38524075810, 29.60959402510;  
-99.38443775680, 29.60941521180; -99.38363683580, 29.60922941530;  
-99.38283807490, 29.60903665400; -99.38204155330, 29.60883694710;  
-99.38124735020, 29.60863031450; -99.38045554450, 29.60841677660;  
-99.37966621480, 29.60819635470; -99.37887943960, 29.60796907070;  
-99.37809529700, 29.60773494710; -99.37731386500, 29.60749400730;  
-99.37653522100, 29.60724627530; -99.37575944260, 29.60699177550;  
-99.37498660670, 29.60673053330; -99.37421679010, 29.60646257460;  
-99.37345006920, 29.60618792610; -99.37268652030, 29.60590661520;  
-99.37192621920, 29.60561866960; -99.37116924130, 29.60532411800;  
-99.37041566190, 29.60502298980; -99.36966555580, 29.60471531470;  
-99.36891899740, 29.60440112350; -99.36817606100, 29.60408044730;  
-99.36743682020, 29.60375331790; -99.36670134860, 29.60341976790;  
-99.36665320460, 29.60339739890; -99.36650640510, 29.60348331630;  
-99.36590533310, 29.60382759490; -99.36530034800, 29.60416665140;  
-99.36469151000, 29.60450045240; -99.36407887940, 29.60482896470;  
-99.36346251690, 29.60515215590; -99.36284248360, 29.60546999400;  
-99.36221884110, 29.60578244740; -99.36159165100, 29.60608948530;  
-99.36096097570, 29.60639107730; -99.36032687770, 29.60668719350;  
-99.35968941980, 29.60697780450; -99.35904866520, 29.60726288180;  
-99.35840467750, 29.60754239690; -99.35775752050, 29.60781632220;  
-99.35710725840, 29.60808463070; -99.35645395570, 29.60834729580;  
-99.35579767710, 29.60860429150; -99.35513848770, 29.60885559230;  
-99.35447645290, 29.60910117330; -99.35381163830, 29.60934101040;  
-99.35370668800, 29.60937781120; -99.35274370020, 29.61096363800;  
-99.35160081870, 29.61258047620; -99.35033933010, 29.61412852320;  
-99.34896463490, 29.61560114870; -99.34748261710, 29.61699204200;  
-99.34589962330, 29.61829524420; -99.34422243220, 29.61950517170;  
-99.34245822670, 29.62061663950; -99.34061456430, 29.62162488580;  
-99.33869934400, 29.62252558970; -99.33672077000, 29.62331489030;  
-99.33468732150, 29.62398940730; -99.33393465930, 29.62420601000;  
-99.33263893410, 29.62479972500; -99.33214657120, 29.62500898960;  
-99.33070040960, 29.62578711040; -99.32939509940, 29.62641606870;  
-99.32851599930, 29.62681745510; -99.32831513960, 29.62693672860;  
-99.32665327380, 29.62785167960; -99.32491533690, 29.62879770430;  
-99.32383742340, 29.62932177840; -99.32327286020, 29.62966075940;  
-99.32142884570, 29.63066873880; -99.31951328580, 29.63156916590;  
-99.31763144330, 29.63232263280; -99.31539899730, 29.63314394540;  
-99.31530194160, 29.63317949240; -99.31326815540, 29.63385368250;  
-99.31118822810, 29.63441018870; -99.30907107190, 29.63484662820;  
-99.30692576080, 29.63516113030; -99.30476148800, 29.63535234600;  
-99.30258753050, 29.63541945700; -99.30041320380, 29.63536217460;  
-99.29824782800, 29.63518074540; -99.29610068160, 29.63487594560;  
-99.29398096800, 29.63444908360

Attached Graphic

[Boundaries consist of properties under the same ownership or management for facilities operating under a herd plan due to a positive result in a CWD susceptible species in Medina and Uvalde counties.]

(D) Containment Zone 4. That portion of the state lying within the boundaries of a line beginning in Val Verde County at the International Bridge and proceeding northeast along Spur 239 to U.S. 90; thence north along U.S. 90 to the intersection of U.S. 277/377, thence north along U.S. 277/377 to the U.S. 277/377 bridge at Lake Amistad (29.496183°, - 100.913355°), thence west along the southern shoreline of Lake Amistad to International Boundary at Lake Amistad dam, thence south along the Rio Grande River to the International Bridge on Spur 239.

(2) Surveillance Zone Boundaries:

(A) - (B) (No change.)

(C) Surveillance Zone 3. That portion of the state within the boundaries of a line beginning at U.S. 90 in Hondo in Medina County; thence west along U.S. 90 to the Sabinal River [F.M. 187] in Uvalde County; thence north along F.M. 187 to F.M. 470 in Bandera County; thence east along F.M. 470 to Tarpley in Bandera County; thence south along F.M. 462 to U.S. 90 in Hondo.

(D) Surveillance Zone 4. That portion of the state lying within a line beginning in Val Verde County at the confluence of Sycamore Creek and the Rio Grande River (29.242341°, - 100.793906°); thence northeast along Sycamore Creek to U.S. 277; thence northwest on U.S. 277 to Loop 79; thence north along Loop 79 to the Union Pacific Railroad; thence east along the Union Pacific Railroad to Liberty Drive (north entrance to Laughlin Air Force Base); thence north along Liberty Drive to U.S. 90; thence west along U.S. 90 to Loop 79; thence north along Loop 79 to the American Electric Power (AEP) Ft. Lancaster-to-Hamilton Road 138kV transmission line (29.415542°, -100.847993°); thence north along the AEP Ft. Lancaster-to-Hamilton Road 138kV transmission line to a point where the AEP Ft. Lancaster-to-Hamilton Road 138kV transmission line turns northwest (29.528552°, - 100.871618°); thence northwest along the AEP Ft. Lancaster-to-Hamilton Road 138kV transmission line to the AEP Ft. Lancaster-to-Hamilton Road maintenance road (29.569259°, - 100.984758°); thence along the AEP Ft. Lancaster-to-Hamilton Road maintenance road to Spur 406; thence northwest along Spur 406 to U.S. 90; thence south along U.S. 90 to Box Canyon Drive; thence west along Box Canyon Drive to Bluebonnet Drive; thence southwest along Bluebonnet Drive to Lake Drive; thence south along Lake Drive to Lake Amistad (29.513298°, -101.172454°), thence southeast along the International Boundary to the International Boundary at the Lake Amistad dam; thence southeast along the Rio Grande River to the confluence of Sycamore Creek (29.242341°, - 100.793906°).

(E) Surveillance Zone 5. That portion of the state lying within the boundaries of a

line beginning on U.S. 83 at the Kerr/Kimble County line; thence north along U.S. 83 to I.H. 10; thence northwest along on I.H. 10 to F.M. 2169; thence east along F.M. 2169 to County Road (C.R.) 410; thence east along C.R. 410 to C.R. 412; thence south along C.R. 412 to C.R. 470; thence east along C.R. 470 to C.R. 420; thence south along C.R. 420 to F.M. 479; thence east along F.M. 479 to C.R. 443; thence south along C.R. 443 to U.S. 290; thence west along U.S. 290 to I.H. 10; thence southeast along I.H. 10 to the Kerr/Kimble County line; thence west along the Kerr/Kimble County line to U.S. 83.

(c) (No change.)

(d) (No change.)

(e) (No change.)

(f) (No change.)

(g) (No change.)

Figure 4 TAC §40.6(b)(1)(C)

