BONNETT, FAIRBOURN, FRIEDMAN & BALINT, P.C.
PATRICIA N. SYVERSON (203111)
600 W. Broadway, Suite 900
San Diego, California 92101
Telephone: 619-798-4593
psyverson@bffb.com

BONNETT, FAIRBOURN, FRIEDMAN
& BALINT, P.C
VAN BUNCH *(To be admitted Pro Hac Vice)*
2325 E. Camelback Road, Suite 300
Phoenix, AZ 85016
Telephone: (602) 274-1100
vbunch@bffb.com

As local counsel on behalf of:

CALWELL LUCE diTRAPANO PLLC
Stuart Calwell *(To be admitted Pro Hac Vice)*
L. Danté diTrapano *(To be admitted Pro Hac Vice)*
Alexander D. McLaughlin *(To be admitted Pro Hac Vice)*
D. Christopher Hedges *(To be admitted Pro Hac Vice)*
Law and Arts Center West
500 Randolph Street
Charleston, WV 25302
Telephone: (304) 343-4323
scalwell@cldlaw.com
dditrapano@cldlaw.com
amclaughlin@cldlaw.com
chedges@cldlaw.com

Counsel for Plaintiffs

SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF KINGS

ALBA LUZ CALDERON DE CERDA AND RAFAEL CERDA MARTINEZ, on behalf of themselves and as parents and next friends of RAFAEL CERDA CALDERON, a minor, Plaintiffs, v. CORTEVA INC.; DOW CHEMICAL COMPANY; CITY OF HURON, CALIFORNIA; CITY OF AVENAL, CALIFORNIA; WOOLF FARMING CO. OF CALIFORNIA, INC.; "APPLICATOR ID 1020351"; COTTONWEST, LLC; AND JOHN A. KOCHERGEN PROPERTIES, INC. Defendants.	Case No.: 20C-0250 **COMPLAINT** ***Civil Complex Litigation*** **JURY TRIAL DEMANDED**

Plaintiffs Alba Luz Calderon de Cerda and Rafael Cerda Martinez bring the instant civil action for themselves and on behalf of their minor son, Rafael Cerda Calderon ("Rafael Jr."), to recover damages and other cognizable relief arising out of the severe neurological injuries suffered by Rafael, Jr., as a result of his *in utero*, infant, and ongoing exposure to the pesticide chlorpyrifos and its more toxic oxygen analog, chlorpyrifos oxon.

PARTIES AND JURISDICTION

1. Plaintiff Alba Luz Calderon de Cerda ("Alba") currently resides at 261 East Fresno Street, Avenal, Kings County, California. Alba is Rafael Cerda Calderon's mother. She brings this action as the parent and next friend of Rafael Cerda Calderon ("Rafael Jr."), and also on her own behalf, to recover payments made for Rafael Jr.'s care and for loss of parental consortium.

2. Plaintiff Rafael Cerda Martinez ("Rafael Sr.") resides at 261 East Fresno Street, Avenal, Kings County, California. Rafael Sr. is Rafael Jr.'s father. Rafael Sr. and Alba are husband and wife. Rafael Sr. brings this action as the parent and next friend of Rafael Jr., and also on his own behalf, to recover payments made for Rafael Jr.'s care and for loss of parental consortium.

3. Defendant Corteva Inc. is a Delaware corporation with its principal place of business in Wilmington, Delaware. Corteva Inc. is the recently re-branded and spun-off successor-in-interest to Dow Agrosciences, LLC. During all relevant times, Dow (operating as Dow AgroSciences and then Corteva) was registered to do business in the State of California and was in fact doing business in the State of California, and more specifically in Kings County, California. During all relevant times, Dow AgroSciences, operating in combination with its former parent company and Co-Defendant, Dow Chemical Company, was the primary registrant (and essentially the only) manufacturer and seller of chlorpyrifos and chlorpyrifos oxon in the United States. Dow marketed and sold chlorpyrifos and chlorpyrifos oxon for agricultural use under the trade name Lorsban.

4. Defendant Dow Chemical Company is a Delaware corporation with its principal place of business in Midland, Michigan. Dow Chemical has been through a recent string of mergers (e.g., with DuPont) and then spin-offs (e.g., from DuPont), the legal effect of which is that today's Dow Chemical Company is the successor-in-interest to the Dow Chemical Company of the 2000s.

5. At most relevant times, basically for our purposes all of the 2000s, Defendant Dow Chemical Company was the parent company of Dow AgroSciences (n/k/a Defendant Corteva Inc.), and effectively controlled Dow AgroSciences. More importantly, while Dow AgroSciences was, during the 2000s, the legal registrant and seller of Lorsban and all other Dow-family chlorpyrifos and chlorpyrifos oxon products in the United States, Dow Chemical was the actual manufacturer of chlorpyrifos and chlorpyrifos oxon. In other words, while Dow AgroSciences was headquartered in Indianapolis, Indiana, during the 2000s, the actual chlorpyrifos production facilities were located in Midland, Michigan, and operated, upon information and belief, by Dow Chemical Company and employees of Dow Chemical Company. In fact, these chlorpyrifos production facilities were, upon information and belief, inextricably integrated into Dow Chemical's Midland production facilities and the production of other chemicals sold for other purposes, at least some of which were marketed and sold directly by Dow Chemical, not Dow AgroSciences. Dow Chemical therefore had its own stake in the continued production and sale of chlorpyrifos and chlorpyrifos oxon, separate and apart from the contribution of its subsidiary, Dow AgroSciences, to parent Dow Chemical's bottom line. These entities—Corteva, Dow AgroSciences, the Dow Chemical of the 2000s and the Dow Chemical of today—are collectively referred to as "Dow" unless otherwise noted.

6. Defendant City of Huron, California, is a municipal corporation and a political subdivision of the State of California, located in Fresno County, California. At all relevant times, the City of Huron is and has been the owner and operator of a proprietary water treatment plant and water distribution system, including pipes and several water tanks, and sells that water for human consumption and other purposes to businesses and residents of Huron, California.

7. Defendant City of Avenal, California, is a municipal corporation and a political subdivision of the State of California, located in Kings County, California. At all relevant times, the City of Avenal is and has been the owner and operator of a proprietary water treatment plant and water distribution system, including pipes and at least one water tank, and sells that water for human consumption and other purposes to businesses and residents of Avenal, California.

8. Defendant Woolf Farming Co. of California, Inc., is a California corporation with its principal place of business in Fresno, Fresno County, California. At all relevant times, Woolf Farming

was registered to do business as a pesticide applicator in the State of California. According to records maintained by the California Department of Pesticide Regulation ("CDPR"), in September and October 2002, Woolf Farming applied 347 pounds of chlorpyrifos by aerial application to a section of land located just south of Palmer Avenue from the City of Huron's water treatment facility. Woolf Farming applied another 152 pounds of chlorpyrifos by aerial application to the same plot of land in August 2003.

9. Defendant Cottonwest, LLC is a California company with its principal place of business in Fresno County, California. At all times relevant, Cottonwest was registered to do business as a pesticide applicator in the State of California. According to records maintained by the CPDR, in August 2002, Cottonwest applied 300 pounds of chlorpyrifos by aerial application to a section of land located north of the City of Huron's water intake abutting the California Aqueduct. In July and August 2003, Applicator ID 1020011 applied 550 pounds of chlorpyrifos by aerial application to the same section of land.

10. Upon information and belief, Defendant "Applicator ID 1020351" is a California company with its principal place of business in Fresno County or Kings County, California. According to records maintained by the CPDR, in August 2002 and August 2003, Defendant Applicator ID 1020351 applied a total of 792 pounds of chlorpyrifos, all by the aerial method, to a plot of farm land just to the north of to the north of Palmer Avenue and Conquistador Villa apartments, where Rafael Jr.'s mom resided during Rafael Jr.'s gestation (which began in July 2002) and where Rafael Jr. resided for approximately eight months after his birth (until approximately November 2003).

11. Upon information and belief, Defendant John A. Kochergen Properties, Inc. is a California company with its principal place of business in Fresno County, California. John A. Kochergen Properties, Inc. is the successor-in-interest to Alex A. Kochergen Farms, Inc., as a result of a merger between John A. Kochergen Properties and Alex A. Kochergen Farms. At all times relevant, Alex A. Kochergen Farms was registered to do business as a pesticide applicator in the State of California. According to records maintained by the CPDR, in August 2002, Alex A. Kochergen Farms applied chlorpyrifos by ground and aerial application to a section of land located north of the City of Avenal's water intake abutting the California Aqueduct. In 2004, Alex A. Kochergen Farms applied 1,884

pounds of chlorpyrifos by ground application. In 2005, Alex A. Kochergen Farms, applied 687 pounds of chlorpyrifos by ground application. In 2006, Alex A. Kochergen applied 707 pounds of chlorpyrifos by aerial application.

12. Jurisdiction and venue are proper in Kings County, California, because Defendant City of Avenal is located in Kings County, Dow is an out of state corporation that does business in Kings County, Plaintiffs currently reside in Kings County, and many of Rafael Jr.'s exposures to chlorpyrifos and chlorpyrifos oxon described below occurred in Kings County.

FACTUAL ALLEGATIONS

13. Rafael, Jr. was born on March 20, 2003. His gestational age at birth was estimated at 36 weeks.

14. By 15 months of age, it was clear to early intervention specialists that Rafael Jr. had developmental problems, including reduced muscle tone, weakness in his extremities, gross motor delay, and deficits in attention, cognition, language skills, fine motor skills, and social skills. Therefore, the allegations in the instant Complaint focus on the time period from mid-2002, when Rafael Jr. was conceived, through the first year of his life. However, Rafael Jr.'s exposure to, and harm from, chlorpyrifos and chlorpyrifos oxon has been ongoing and continuous throughout his life.

15. Prior to 20 months of age, Rafael Jr. experienced several episodes believed by his parents and healthcare providers to have been seizures, and he was treated for a seizure disorder. These episodes were effectively controlled by seizure medication.

16. Rafael Jr. has subsequently been diagnosed with attention deficit and hyperactivity disorder ("ADHD"), autism, and mental retardation. He has ongoing difficulties with verbal and nonverbal communication, personal hygiene, and attending to his own needs and activities of daily living. It is extremely unlikely that Rafael Jr. will ever be able to be gainfully employed or able to live independently, and he is reasonably certain to need some assistance and care for the rest of his natural life.

17. Rafael Jr.'s injuries were proximately caused by his *in utero* exposure to chlorpyrifos and chlorpyrifos oxon beginning around July 2002, when his mother, Alba, became pregnant with him, and his subsequent exposure to chlorpyrifos and chlorpyrifos oxon as an infant.

18. These chlorpyrifos and chlorpyrifos oxon exposures came from multiple sources and routes: Rafael Jr.'s mother's handling of citrus fruits and lettuce as a packing house worker during her pregnancy; his consumption as an infant of chlorpyrifos oxon-laden tap water drawn from the California Aqueduct and at times recycled from the Huron treatment plant's own filter backwash, which was loaded with chlorpyrifos and chlorpyrifos oxon captured in the filter and soaked in the sediments of the backwash ponds around the Huron water plant; secondary transfer from his father's work as a pesticide sprayer in agricultural fields to Rafael Jr.'s mother during her pregnancy, and, on occasion, to Rafael Jr. as an infant; and, at all times, from chlorpyrifos overspray and spray drift, much of which first converted to chlorpyrifos oxon, that entered the structures where Rafael Jr.'s mother worked and lived during her pregnancy and where Rafael lived as an infant. These exposures are described in more detail in the "Exposures" subsection, below.

History of Chlorpyrifos

19. On April 5, 1966, the Dow Chemical Company—the predecessor in interest and former parent of Dow AgroSciences LLC and therefore the predecessor in interest of Corteva—was awarded United States Patent Number 3,244,586 which provided patent protection for various formulations of o-pyridyl phosphates and phosphorothioate-based pesticides. One of the patented phosphorothioate formulations (*O,O – diethyl O – 3,5,6 – pyridyl phosphorothioate*) became known as the pesticide "chlorpyrifos." One of the patented phosphate pesticide formulations (*diethyl 3,5,6-trichloro-2-pyridyl phosphate)* is the oxygen analog of Chlorpyrifos and is known as "chlorpyrifos oxon."

20. Chlorpyrifos is approved and registered by the United States Environmental Protection Agency (EPA) for use as a pesticide in a variety of agricultural applications and was approved for a variety of residential applications until 2000. Chlorpyrifos is identified as the active ingredient on the labels of the numerous commercial, brand name, pesticide formulations hereinafter complained of and identified with particularity.

21. Chlorpyrifos oxon is a much more acutely potent and deadly neurotoxin, belonging to the same family of organophosphate-based pesticides as the chemical warfare agent, Sarin. In the mid 1930's, a German chemist, Gerhard Schrader, developed Sarin as a pesticide to combat insects adversely impacting German agriculture. Because of its extraordinary human neurotoxicity, Sarin was

never implemented as an agricultural pesticide in Germany. Like Sarin, chlorpyrifos oxon is an extremely potent human neurotoxin.

22. Even though chlorpyrifos oxon (hereinafter "oxon") was included as a pesticide in the chlorpyrifos patent, it has never been registered or presented for registration with and to the EPA as a pesticide due to its extreme neurotoxicity. Chlorpyrifos, although registered as a pesticide, has little or no insecticidal action prior to being converted to the oxon. When Chlorpyrifos is mixed with water (almost always chlorinated treated water or water recycled from agricultural fields that is contaminated with brominated pesticides) and applied to the fields and orchards, it converts to the unregistered, but Dow-patented pesticide, chlorpyrifos oxon.

23. Dow claims that the effectiveness of chlorpyrifos as an insecticide depends on the target insect's biologic ability to convert chlorpyrifos, once ingested, to the oxon. Dow does not disclose that chlorpyrifos is unstable in the environment—particularly in the presence of chlorine or bromine, which catalyze the conversion—and that it quickly begins to convert to oxon when mixed with water according to label directions, nor does Dow disclose that it will also convert in sunlight during and after application, which Dow knew or should have known as far back as the late 1960s or early 1970s. Unlike chlorpyrifos, the oxon is relatively stable in the environment, especially once it gets indoors, so that its toxic effects persist for months. The practical effect of this reality is that an application of chlorpyrifos to the fields and orchards of California's Central Valley is an application of the unregistered neurotoxin, chlorpyrifos oxon.

24. At all relevant times, and as more particularly stated hereinafter, Dow had actual notice and knowledge of the propensity of its product, chlorpyrifos, to convert to its oxygen analog, oxon, in the agricultural environment. At no time did Dow provide any label warning regarding the dangers of oxon contamination related to the application of chlorpyrifos.

Revelations in the 1990s and Early 2000s

25. In 1995, roughly eight years before Rafael Jr.'s birth, the United States Environmental Protection Agency ("EPA") fined Dow for failing to report what are known in the industry as "adverse incidents"—incidents where Dow received notice that a person claims or is believed to have been

poisoned by chlorpyrifos. Many of the incidents that Dow failed to report involved children who had been poisoned.

26. Despite Dow's efforts to conceal the harmful effects of chlorpyrifos and chlorpyrifos oxon from consumers, parents, agricultural communities, and the public, by July 2002, regulators and other researchers doing their own investigations into the hazards of chlorpyrifos had started to uncover some of the truths that Dow sought to conceal.

27. Two years before Rafael Jr.'s conception, on June 8, 2000, the EPA conducted a thorough review of data submitted by Dow and determined that chlorpyrifos is toxic to the developing nervous system and brain of mammals and children and that, therefore, an additional safety factor was required for uses that might expose children to chlorpyrifos. This EPA finding led to chlorpyrifos being withdrawn from the residential pesticide market, where it had been marketed as "Dursban."

28. At around the same time in 2000, concerns about minuscule quantities of chlorpyrifos remaining as residues on foods commonly consumed by children nationwide—even *after* washing and processing by packing-house workers like Rafael Jr.'s mom and other workers in California's Central Valley—led Dow to stop marketing Lorsban for applications involving tomatoes and apples, crops thought to be associated with consumption by children in the United States.

29. Incredibly, however, despite Dow's knowledge that fetuses, infants, and young children were at heightened risk of developmental and neurological injuries, Dow continued to market and sell Lorsban for all other crops—even though comparatively much larger exposures necessarily result to the children of agricultural workers and children living in agricultural communities like the cities of Huron and Avenal and other locations in California's Central Valley. Chlorpyrifos and chlorpyrifos oxon continues to be sold and sprayed liberally on all other crops almost 20 years later—especially on orchards and other crops growing on trees and bushes, like citrus fruits and pistachios and tree nuts. The calculus used by Dow's toxicologists, risk assessors, market analysts, and executives to justify this distinction between tomatoes and apples versus all other crops remains obscure. Interestingly, apples are one of the only crops for which total production in the State of Michigan, where Dow's ultimate decision-makers lived and worked at the time, rivals or exceeds production in the State of California.

30. Lorsban continued to be marketed and sold for extensive use in California's Central Valley during Rafael Jr.'s gestation and infancy. In fact, the amount of chlorpyrifos and chlorpyrifos oxon applied per acre to citrus fruits in California's Central Valley dramatically increased in the early 2000s—during this critical period of Rafael Jr.'s development—apparently in response to emerging or alleged insect resistance. Dow continued to sell Lorsban for use in California's Central Valley until February 2020, and growers can continue to apply it to their fields until the end of the current year, roughly 20 years after Dow's executives and managers plainly knew that chlorpyrifos and chlorpyrifos oxon were too dangerous to risk their own children's exposure to minuscule, trace quantities of chlorpyrifos in apple sauce, ketchup, and pasta sauce.

31. Two years later after the EPA determined that the developing brains and nervous systems of children were especially vulnerable to chlorpyrifos, researchers working with another important United States agency—the United States Department of Agriculture—published their discovery that water containing chlorine (which is typically added to tap water for disinfecting and sometimes oxidizing purposes) causes chlorpyrifos to transform to chlorpyrifos oxon.[1] The publication of these findings, which almost surely were known to Dow beforehand, roughly coincided with Rafael Jr.'s conception, in July 2002.

32. These same researchers noted in their July 2002 publication that chlorpyrifos oxon is approximately 1,000 times more toxic than chlorpyrifos itself, and that their findings therefore raised important concerns about the safety of chlorpyrifos products. Despite this publication, which obviously should have raised alarm bells in Dow's product stewardship and toxicology departments—assuming, that is, the doubtful proposition that Dow was not already aware of the propensity of chlorpyrifos to transform to chlorpyrifos oxon in mixtures containing chlorinated water and elsewhere—Dow did not sound any alarms, at least not publicly. Chlorpyrifos continued to be marketed—without any additional warnings—for agricultural use in California's Central Valley, and to fields that abut the California Aqueduct, from which communities like Huron and Avenal draw their drinking water.

[1] Wu, J. and Laird, D., "Abiotic transformation of chlorpyrifos to chlorpyrifos oxon in chlorinated water," *Environmental Toxicology and Chemistry*, vol. 22(2): 261–62 (2002).

Rafael Jr.'s Exposures to Lorsban During Gestation and Infancy

33. In and around Fall 2002, during her pregnancy, Rafael Jr.'s mother, Alba, worked for several months in a packing house situated between Avenal and Huron, where she primarily processed and handled citrus fruits (oranges and lemons) and lettuce, crops known for having high levels of chlorpyrifos residue in this time frame. Given the prevailing practice of washing the produce in highly chlorinated water, the washing of this produce by packing house workers such as Alba converted large portions of the chlorpyrifos residues on the produce to chlorpyrifos oxon, the analyte that is 1,000 times as toxic as chlorpyrifos itself.

34. It has been known and knowable from animal studies for many years prior to Rafael Jr.'s gestational exposure in 2002 that chlorpyrifos and chlorpyrifos oxon enter the blood stream and cross through the umbilical cord blood to the fetuses of mammals, which, depending on the dose and other factors, causes developmental toxicity.

35. Extensive testing of cord blood samples by researchers in New York City and elsewhere in the 2000s subsequently confirmed that when pregnant women are exposed to chlorpyrifos through skin contact, the breathing of volatilized and aerosolized chlorpyrifos, and ingestion of dust particles, that chlorpyrifos enters the pregnant mother's blood stream and is passed through cord blood to the developing baby. The same scientists confirmed—in published, peer-reviewed studies from the 2000s—that residential exposures in New York City housing from indoor crack-and-crevice applications of chlorpyrifos result in cord blood levels that cause permanent neurological damage to the developing human fetus, resulting in a significantly and dramatically increased chance of developmental delays and permanent deficits in learning, memory and cognition to the exposed children.

36. Unlike the participants in the New York City housing studies from the 2000s, Rafael Jr.'s mother's cord blood was not tested for chlorpyrifos levels at his birth, so a precise, quantitative comparison cannot be made between Rafael Jr.'s fetal exposure and those in the New York City studies. However, drawing on other literature from agricultural workers and by using scientific techniques for estimating and comparing exposures under different scenarios, it is clear that the expected exposure of Rafael Jr. to chlorpyrifos and chlorpyrifos oxon resulting from his mother's

employment and handling of contaminated produce in a citrus and lettuce packing house during her pregnancy equaled or exceeded the high end exposures of New York City residents. Yet this single exposure scenario was far from Rafael Jr.'s only gestational and infant exposure to chlorpyrifos and chlorpyrifos oxon.

37. The particular packing house where Rafael Jr.'s mother worked during her pregnancy was situated between Huron and Avenal in a veritable ocean of pistachio orchards, lettuce, cotton, almonds, and grapes—crops inundated with chlorpyrifos in this time frame. Approximately 1,875 pounds of chlorpyrifos were applied within a 2 mile radius of the packing house over 17 application events between August and October 2002. Eight of these 17 chlorpyrifos applications were by aerial spraying, a method of application that necessarily results in significant overspray and spray drift, which permeated the air and entered the packing house facilities. Some of this chlorpyrifos was converted to chlorpyrifos oxon when diluted with water prior to application, and much of the rest was converted to the oxon in the atmosphere due to the presence of sunlight, hydroxyl radicals, ozone, and fog. The result was a packing house environment with high concentrations of chlorpyrifos and chlorpyrifos oxon from spray drift to which the workers, including Alba, were also exposed, in addition to the direct contact exposure from handling and washing chlorpyrifos and chlorpyrifos-oxon contaminated produce.

38. A similar circumstance existed with respect to Conquistador Villa apartments, located at 16201 W. Palmer Ave., in Huron, where Rafael Jr.'s mom resided during her pregnancy and where Rafael Jr. lived with his family for the first roughly eight months of his life, until November 2003. Approximately 792 pounds of chlorpyrifos were applied within the one-mile section north of Rafael Jr.'s apartment in 2002 and 2003. Five of the six applications of this chlorpyrifos during that time were by aerial spraying, over 100 pounds in each of those five, resulting in significant overspray and spray drift, and infiltrated the apartment unit where Rafael Jr. and his mother resided. Some of this chlorpyrifos was converted to chlorpyrifos oxon when diluted with water prior to application, and much of the rest was converted to the oxon in the atmosphere due to the presence of sunlight, hydroxyl radicals, ozone, and fog. The result was that Rafael Jr.'s mother was exposed to significant concentrations of chlorpyrifos and chlorpyrifos oxon in her living space during her pregnancy, and

Rafael Jr. himself was exposed to significant concentrations of chlorpyrifos and chlorpyrifos oxon during the eight months of his life spent in Conquistador Villa apartments.

39. Another significant source of chlorpyrifos and especially chlorpyrifos oxon was the tap water supplied by Defendant City of Huron to Rafael Jr.'s family when they resided in Conquistador Villa apartments. The City of Huron draws their tap water straight from the California Aqueduct. Approximately 1,608 pounds of chlorpyrifos were applied along the 3 mile stretch of the California Aqueduct surrounding the City of Huron's water intake in 2002 and 2003. This chlorpyrifos and chlorpyrifos oxon would migrate into the Aqueduct, especially during periods of peak run-off from storms and other weather events, and then much of it would make its way into the Huron intake.

40. Even more alarming, during this same 2002 and 2003 time frame, Defendant City of Huron had an open-air tank on site at its main facility that it used for flocculation prior to filtration. Huron also backwashed its filters on three sediment ponds located onsite at the main treatment site. Huron then recycled the backwash without pre-treating it. Therefore, significant portions of the chlorpyrifos and chlorpyrifos oxon sprayed on adjacent farming fields that migrated onto the site of Huron's treatment facility was likely to find its way into the treatment plant, either through the open-air tank or the recycled filter backwash. Approximately 1,290 pounds of chlorpyrifos were applied just on the fields adjacent to the Huron treatment facility—within a one mile section to the south of the water plant and the one mile section to the northwest of the plant—in 2002 and 2003. Eight of the ten applications of chlorpyrifos were by aerial spraying, resulting in significant overspray and spray drift.

41. Chlorpyrifos that enters any water treatment facility, such as Huron's in 2002 and 2003, is unlikely to be effectively removed by the treatment and filtration process. The filters may remove some chlorpyrifos, but certainly not all, even under the best conditions, and Huron's water system does not and did not operate under anything approximating the best conditions. Indeed, a portion of the water was prepared by direct filtration, meaning that sedimentation was not removed from the water through coagulation and flocculation before sending it into the filters, dramatically increasing both the chlorpyrifos load on the filters (because chlorpyrifos binds to sediments) and the burden on the filters.

42. Chlorine will eventually break chlorpyrifos down into non-toxic byproducts, but not before first breaking chlorpyrifos down into the much more toxic chlorpyrifos oxon. Chlorine has to be in

contact with this chlorpyrifos oxon for many hours to complete this process, which takes a minimum of seven hours, sometimes much longer depending on a variety of factors. The City of Huron's distribution system is small, and the Conquistador Villa apartments where Rafael Jr. and his mother lived are located less than a mile from the treatment facility, in the northeast corner of Huron nearest the facility.

43. Given all of this, it is nearly certain that tap water supplied by Defendant City of Huron and used by Rafael Jr.'s mother during her pregnancy for bathing, cooking, and drinking contained significant quantities of chlorpyrifos oxon following periods of spraying at fields adjacent to the treatment plant and also following storms and other run-off events impacting the quality of water in the California Aqueduct. This chlorpyrifos oxon entered her bloodstream and umbilical cord blood and thereby entered Rafael Jr.'s blood. Moreover, during the first eight months of Rafael Jr.'s life, when he and his family still lived in the Conquistador Villa apartments, Rafael Jr. was bottle fed with formula mixed with this same chlorpyrifos oxon-contaminated tap water, which he ingested straight into his infant body.

44. Unfortunately, Rafael Jr.'s water was contaminated even after the family moved in November 2003, when Rafael was eight months old and still formula feeding. Rafael Jr. and his family moved to a home at 1033 Fremont Street, Avenal, California, where tap water service was provided by Defendant City of Avenal, which, like Huron, also drew (and still draws) water directly from the California Aqueduct. According to records maintained by the State of California, the fields upstream of the Avenal water system intake were even more heavily sprayed with chlorpyrifos and chlorpyrifos oxon during this time frame when Rafael Jr. was drinking a mixture of infant formula and Avenal tap water, in late 2003 and the early part of 2004. Approximately 2,866 pounds of chlorpyrifos were applied within a one-mile radius of the California Aqueduct upstream and surrounding the City of Avenal's water intake just in 2003 and 2004. In subsequent years, from 2005 to 2017 approximately 213 pounds per year were applied on the average within a one-mile radius upstream and surrounding the City of Avenal's water intake. As with the tap water from Huron, this chlorpyrifos oxon-contaminated Avenal tap water was ingested directly by Rafael Jr. Rafael Jr. lived in the home on Fremont Street for approximately four years, during which time Rafael Jr. bathed, washed his hands,

drank, and ate food cooked in that tap water. For the first four months of that time, Rafael Jr.'s main source of sustenance consisted of infant formula mixed with the tap water.

45. One last significant source of chlorpyrifos and chlorpyrifos oxon exposure came from secondary contact with Rafael Jr.'s father, Rafael Sr., who worked as a pesticide sprayer in 2002 and 2003, during Rafael Jr.'s mother's pregnancy and the first year of Rafael Jr.'s life, spraying, among other chemicals, Lorsban mixed with chlorinated or brominated water, a combination guaranteed to produce a mixture of chlorpyrifos and chlorpyrifos oxon in water, although the label did not mention the chlorpyrifos oxon. Rafael Sr. ordinarily tried to take off his chemical-laden clothes when he returned from work, but sometimes his young family and young children, including Rafael Jr., excited to see him, met him at the door and hugged him or asked to be held by him. Sometimes dinner was ready and he was called to eat before changing. This resulted in another significant exposure to chlorpyrifos and chlorpyrifos oxon for Rafael Jr. during his gestation and infancy.

46. As a direct and proximate consequence of the above exposures to chlorpyrifos and chlorpyrifos oxon during gestation and infancy, Rafael Jr. suffered from the severe neurotoxic effects of chlorpyrifos and its oxon analyte. The neurotoxic effects of these exposures caused attention deficit and hyperactivity disorder ("ADHD"), autism, seizures, and mental retardation. Each of the above exposures independently contributed to Rafael Jr.'s neurological injuries, and the cumulative effect of all of them combined was devastating to him and to his family.

COUNT I – NEGLIGENCE AS TO THE DOW DEFENDANTS

47. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

48. Beginning in the 1980s and continuing into the 1990s and 2000s, Dow engaged in a pattern of conduct designed to hide the dangers of chlorpyrifos from its customers and the general public. At best, this conduct could be characterized as the negligent failure to test for certain specific harms or to appreciate and take appropriate measures to protect from those harms associated with chlorpyrifos. At worst, it amounted to selfish, greedy, malicious, and willful manipulation of the scientific data and the public's perception of the harms of Lorsban—that is, chlorpyrifos and chlorpyrifos oxon.

49. All of these actions and omissions—whether willful, reckless, or merely negligent—were in the service of the false (and certainly untested) safety narrative that Dow promoted for years, which

is that the toxicity of chlorpyrifos is mediated solely by cholinesterase inhibition, the first and main toxic effect, and therefore any dose that does not result in acute cholinergic signs and symptoms (such as salivation, lacrimation, sweating, rapid heartrate, etc.), has no adverse impact.

50. Dow used this untested safety narrative for years as an internal excuse to conceal numerous reports of chlorpyrifos poisoning and adverse effects following applications, on the grounds that it simply could not be verified as a chlorpyrifos-related adverse event if the person allegedly poisoned did not show signs and symptoms of a cholinergic reaction. Notice the perfectly subversive nature of this logic: If a manufacturer does not report incidents involving suspected poisoning in the absence of acute cholinergic signs on the grounds that there were no acute cholinergic signs, no evidence can come to light that poisoning does, in fact, occur in the absence of acute cholinergic signs.

51. However, Dow's willful concealment of these reports was discovered in the early 1990s, and Dow was fined for it by EPA in 1995.

52. In response, Dow doubled down on its safety narrative, paying a panel of "independent" researchers to review spoon-fed studies and literature at its behest, and conclude, in 1997: "The available scientific evidence provides no basis for concern that [chlorpyrifos] causes human adverse health effects other than its known cholinergic effects associated with acute poisoning." Statements like this succinctly captured Dow's central chlorpyrifos narrative. It was at best untested and supported only by the circular reasoning embodied in Dow's willful concealment of adverse incident reports that challenged the cholinergic poisoning narrative even in 1997.

53. In fact, Dow's safety narrative had already been contradicted by 1997 by recent publications that focused on low-dose, non-cholinergic harm in mammalian development, but it would have fallen apart completely in the years between 1997 and Rafael's birth in 2003 but for Dow's negligent, reckless, and willful manipulation of data and public opinion.

54. There are a fair number of subparts to Dow's false chlorpyrifos safety narrative. One is Dow's denial of any special risk of toxicity to children or developing brains that might happen through any mechanism other than cholinesterase inhibition or in the absence of acute cholinergic signs and symptoms. Another is Dow's denial of any neurotoxic effects from chronic, low-dose poisoning below the threshold for clinical signs and symptoms of cholinergic poisoning. Yet another critical component

of this narrative is Dow's insistence that chlorpyrifos is only converted to chlorpyrifos oxon inside the host organism, such as the target pest or non-target human bystander, and that this need for biological conversion adds a layer of protection because detoxification of chlorpyrifos oxon occurs at the same sites (e.g., the liver) as the conversion. All of these were fundamentally untested and ultimately false propositions. Dow knew or should have known that all of these propositions needed to be tested well before Rafael Jr.'s conception in 2002. Instead, Dow delayed testing them until forced to do so by regulatory requirement or regulatory agency pressure, and then concealed and misrepresented findings that were unfavorable to its narrative.

55. Another reason Dow promoted its favored narrative was to deny any reason or responsibility for conducting careful exposure studies of children or others in various exposure scenarios, whether agricultural or biological, behind the false claim the cholinesterase monitoring and vigilance for signs of cholinergic poisoning were sufficient to determine whether any humans were getting a potentially harmful dose. "Biological monitoring"—the process of testing urine or blood for the presence of a toxicant or a unique metabolite of a toxicant—was available for chlorpyrifos by the late 1980s. The need to carefully assess the exposures and potential exposures of children to chlorpyrifos was known within the risk assessment community in the 1980s and actually flagged by researchers with the California Department of Food and Agriculture's Worker Health and Safety Branch in the 1980s and stated in a 1990 publication of that agency. Yet Dow conducted no biological monitoring of any sort to quantify the exposures of children from various use patterns and exposure scenarios, such as the exposures identified above that resulted in Rafael Jr.'s poisoning.

56. Dow also failed to consider or test the possibility that chlorpyrifos was a developmental neurotoxicant—that is, toxic to the nervous systems of fetuses and infants—for years. The EPA first issued a standardized protocol for developmental neurotoxicity testing in 1991, but Dow did not design or begin such a test until an independent researcher first published a study in 1995 suggesting that chlorpyrifos was, indeed, a developmental neurotoxicant and that the mechanism was something other than cholinesterase inhibition. So, in response, Dow undertook its own developmental neurotoxicity study specifically to refute those findings. When Dow finally disclosed the findings of that study in 1998, Dow misleadingly and falsely dismissed a critical and clearly significant adverse effect on a

specific part of the brain of the developing rat pups in its own chlorpyrifos study group, and assured the public and regulators that the study provided no evidence of developmental neurotoxicity.

57. That 1995 study by independent researchers was also important because it involved chronic low dose exposures to rat pups, rather than a single acute and symptomatic poisoning. In response to this threat to Dow's chlorpyrifos safety narrative, Dow designed and commissioned an expensive study by researchers at the University of Michigan of its own adult worker populations in its chlorpyrifos manufacturing plant in Midland, Michigan. The thought was that workers at Dow's chlorpyrifos plant represented a population of persons exposed to repeated or chronic low level doses of chlorpyrifos. These researchers began their research in the late 1990s and finalized their report for EPA submission in 2002, before Rafael Jr.'s birth, and subsequently published several journal articles from the study.

58. The researchers at the University of Michigan were nominally independent, but, upon information and belief, they were intimately aware of who was funding the research and regularly communicated with their contacts at Dow. Upon information and belief, these researchers found adverse neurological effects during the course of analyzing the data from the study, but did not report or disclose those adverse findings in the final report that Dow submitted to the EPA in 2002. The adverse neurological findings from the study only emerged in the public literature in 2007, in a published journal article from the study, when, many years after the study was completed and a report omitting this analysis and finding was delivered to the EPA, the University of Michigan team published an article attempting to explain the adverse findings away on the basis of a convoluted and twisted post hoc analysis of the data.

59. In 2002, researchers working with the United States Department of Agriculture ("USDA") published findings that challenged another foundational element of Dow's chlorpyrifos safety narrative when they reported that chlorinated water catalyzes the transformation of chlorpyrifos to chlorpyrifos oxon, which is 1,000 times as toxic to mammals as chlorpyrifos itself. Dow's safety narrative depends heavily on the notion that mammals, including humans, are protected from chlorpyrifos toxicity by the need for it to be converted to chlorpyrifos oxon in the body, at sites where that oxon can be rapidly detoxified. Moreover, all or almost all of the laboratory science supporting the registrations of chlorpyrifos and various Lorsban products were conducted using analytical grade chlorpyrifos or

formulations of chlorpyrifos that would not be influenced by this chlorine conversion, and therefore were rendered largely irrelevant by the discovery. In other words, as of July 2002, at the latest, Dow knew or should have known that Dow's toxicity testing conducted on pure chlorpyrifos and pure chlorpyrifos formulations did not meaningfully say anything about the safety of its Lorsban products given that—after diluting with chlorinated (or brominated) water per the instructions on the label—they began converting to a compound that is 1,000 times as toxic.

60. In fact, Dow—as the manufacturer, seller, and registrant of chlorpyrifos and many Lorsban products that it instructed users to dilute with water before use—should have investigated and discovered this abiotic conversion in the presence of chlorinated water, which describes almost all tap water, and brominated water, given the similarity between bromine and the ubiquitous nature of brominated pesticides in agricultural settings. In fairness, given what we know about Dow's sophisticated culture, Dow probably did know about the abiotic conversion of chlorpyrifos to chlorpyrifos oxon well before USDA discovered it for itself.

61. Dow's response to the publication of the USDA research was, first, to ignore it, and then to set about challenging the claim that chlorpyrifos oxon was, in fact, 1,000 times as toxic, a proposition that Dow had never invested much in challenging before.

62. In 2009, Plaintiffs' counsel commissioned an independent expert review of chlorpyrifos studies published by Dow scientists in refereed journals. The experts identified nine "core" experimental studies published by Dow researchers of the effects of chlorpyrifos on mammalian toxicology ranging from 1980 to 2000, with four of the nine published in 2000, a period of intense regulatory scrutiny. The experts also identified approximately ten relevant "secondary" studies by Dow researchers.

63. That independent expert review concluded that the Dow publications were littered with numerous errors and problems, such as: the use of atypical and inappropriately small sample sizes; analyzing only a subset of the data in a way that increases the likelihood of a false negative finding; inappropriately crude measurement techniques; the use of inappropriate and subjective qualitative measures; a failure to further investigate findings of near-statistical significance; discounting valid findings; and making unsupported claims. All of the problems and errors in Dow's published studies

identified by the expert review were biased in the direction of making it less likely that a study would find an adverse effect associated with chlorpyrifos.

64. In other words, Dow contaminated the published information and literature available on chlorpyrifos with bad science, through its negligent, reckless, and willful underreporting and concealment of adverse incidents and its overproduction of studies finding no adverse effects by heavily biased design. This was all done to promote Dow's favored safety narrative on chlorpyrifos and conceal the dangers of chlorpyrifos from the public, so Dow could continue to sell it and sell it without the kind of warnings that would be required to prevent catastrophic injuries like those suffered by Rafael Jr. and his family.

65. Dow's negligence, recklessness, and willfulness worked to disastrous effect on at least two levels. First, Dow itself failed to take appropriate measures in light of what it knew or should have known were the risks and harms of chlorpyrifos, especially to infants and children, from doses below the level of cholinergic signs and symptoms. Second, by concealing critical information from the public and contaminating the public discussion and literature with false assertions and biased studies, Dow prevented others—such as homeowners, parents, employers, and regulators—from taking steps necessary to protect themselves and their children, employees, employees' children, and citizens from these harms.

66. Had Dow taken the steps that a reasonably careful manufacturer would have taken, and conducted additional tests, reported the results, and adopted protective measures in response, then a reasonable manufacturer in possession of that knowledge would have removed Lorsban from the market entirely before 2002.

67. At the very least, a reasonable manufacturer would have issued stricter directions for use and warnings in at least the following ways: It would have recommended that applicators mix chlorpyrifos only with purified or distilled water, not with chlorinated tap water or water from agricultural runoff where brominated pesticides are applied; it would have warned specifically of the likelihood that applicators and bystanders would encounter chlorpyrifos oxon directly, a much more toxic substance than the chlorpyrifos listed as an active ingredient on the label; it would have warned of the special risks to children and the risks from chronic low-dose exposures even in the absence of

cholinergic signs and symptoms; it would have increased the required distance or "setback" from occupied structures, both residential and business structures (including packing houses), to prevent the occurrence of overspray and spray drift entering occupied buildings where pregnant women or children are likely to be present; and it would have warned against use near "aqueducts" and "canals" or any body of water from which potable water is drawn specifically in its label. Instead, Dow's Lorsban labels warned only of use "adjacent to permanent bodies of water such as rivers, natural ponds, lakes, streams, reservoirs, marshes, estuaries, and commercial fish ponds." By excluding "canals" and "aqueducts" from the list, Dow created the impression that the only harm at issue was a harm to aquatic life, not to residents of Central Valley towns that consume drinking water sourced from the California Aqueduct.

68. As a result of Dow's negligence, recklessness, and willfulness, as described in the preceding paragraph, Lorsban was misbranded under federal law and EPA regulations, including 7 U.S.C § 136j(a)(1) and 40 C.F.R. §§ 156.10(i)(2)(vi) and 156.10(i)(2)(x), due to its failure to include the necessary instructions for dilution and limitations and restrictions on use noted in the preceding paragraph, which were required to prevent unreasonable adverse effects. Therefore, this right of action is not preempted by federal law. Plaintiffs are not making a claim under federal law but note it only for purposes of avoiding unnecessary arguments and motion practice relating to federal preemption.

69. Dow's negligence, recklessness, and willfulness were the proximate cause of Rafael Jr.'s developmental and neurological injuries, including autism, ADHD, seizures, and mental retardation.

COUNT II – STRICT PRODUCTS LIABILITY – FAILURE TO WARN

AS TO THE DOW DEFENDANTS

70. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

71. Dow, as the manufacturer and seller of Lorsban products in the United States, had a duty under California law to know the expected uses and ensure that its Lorsban products, as manufactured, designed, and labeled, were safe for those reasonably expected uses.

72. The reasonably expected uses of Lorsban products in the early 2000s included all of the uses described in preceding sections of this Complaint that resulted in Rafael Jr.'s exposure to chlorpyrifos and chlorpyrifos oxon during gestation and infancy and as a toddler. It was reasonably

foreseeable and expected that pregnant women and infants such as Rafael Jr. would be exposed to Lorsban in these ways.

73. Dow had comparable, if not identical, duties under federal law that prohibits that misbranding of pesticides. *See* 7 U.S.C § 136j(a)(1) and 40 C.F.R. §§ 156.10(i)(2)(vi) and 156.10(i)(2)(x). Plaintiffs are not suing under those federal laws or duties, and note them only for purposes of avoiding unnecessary arguments and motion practice related to federal preemption.

74. By the time Rafael Jr. was conceived in 2002, Dow knew or should have known that Lorsban, as labeled and sold, was not safe for its reasonably expected uses in California's Central Valley because it lacked warnings and instructions necessary to render it reasonably safe for its reasonably expected uses. Warnings and instructions that were required to make Lorsban safe but were omitted relate to, at least, the following hazards and necessary remedial measures, all of which were known when Rafael Jr. was conceived:

(i) Chlorpyrifos transforms to chlorpyrifos oxon in the presence of chlorinated or brominated water. Chlorpyrifos oxon is 1,000 times more toxic to mammals than chlorpyrifos. Therefore, Dow should have recommended, at minimum, that applicators mix chlorpyrifos only with purified or distilled water, not with chlorinated tap water or water from agricultural runoff where brominated pesticides are applied. Dow should have recommended against the use of Lorsban products adjacent to or near "canals" and "aqueducts"—such as the California Aqueduct, from which small towns in California draw tap water—in addition to other specifically identified bodies of water on the label. Dow also should have warned specifically of the likelihood that applicators and bystanders would encounter chlorpyrifos oxon directly, a much more toxic substance than the chlorpyrifos listed as an active ingredient on the label.

(ii) Chlorpyrifos and chlorpyrifos oxon were already known to be particularly hazardous to the developing nervous systems of mammals. Therefore, Dow should have warned of the special risks to children and the extra care required around structures where children or pregnant women might be present. For example, Dow should have increased the required distance or "setback" from occupied structures, both residential and business

structures (including packing houses), to prevent the occurrence of overspray and spray drift entering occupied buildings where pregnant women or children are likely to be present.

(iii) Chlorpyrifos and chlorpyrifos oxon were already known to cause neurotoxic effects in the absence of acute cholinergic signs and symptoms, such as from chronic low-dose exposures to children and adults. Therefore, Dow should have warned of the special risks to children and the extra care required around structures where children or pregnant women might be present. For example, Dow should have increased the required distance or "setback" from occupied structures, both residential and business structures (including packing houses), to prevent the occurrence of overspray and spray drift entering occupied buildings where pregnant women or children are likely to be present. In order to prevent chronic, low dose exposure from drinking, cooking with, and bathing in Lorsban-contaminated tap water, Dow should have recommended against the use of Lorsban products adjacent to or near "canals" and "aqueducts"—such as the California Aqueduct, from which small towns in California draw tap water—in addition to other specifically identified bodies of water on the label.

75. Had Dow included warnings and instructions such as the ones identified in the preceding paragraph, Rafael Jr. would have been exposed to significantly less, if any, chlorpyrifos and chlorpyrifos oxon, and would not have suffered his severe neurological injuries. Dow's inadequate warnings and instructions for use were therefore the proximate cause of Rafael Jr.'s developmental and neurological injuries, including autism, ADHD, seizures, and mental retardation.

COUNT III – STRICT PRODUCTS LIABILITY – DESIGN DEFECT

AS TO THE DOW DEFENDANTS

76. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

77. Dow, as the manufacturer and seller of Lorsban products in the United States, had a duty under California law to know the expected uses and ensure that its Lorsban products, as manufactured, designed, and labeled, were safe for those reasonably expected uses.

78. The reasonably expected uses of Lorsban products in the early 2000s included all of the uses described in preceding sections of this Complaint that resulted in Rafael Jr.'s exposure to chlorpyrifos and chlorpyrifos oxon during gestation and infancy and as a toddler. It was reasonably foreseeable and expected that pregnant women and infants such as Rafael Jr. would be exposed to Lorsban in these ways.

79. Federal law permits states to prohibit the sale of any pesticide that is unreasonably dangerous as designed. Therefore, claims for design defect are not preempted by federal law.

80. Dow's Lorsban products were defectively designed for two reasons: First, they were more dangerous than the ordinary consumer or end user would reasonably expect. Second, Dow's Lorsban products contained active insecticidal ingredients, chlorpyrifos and chlorpyrifos oxon, that rendered the products unreasonably dangerous, and there were safer alternative insecticidal ingredients available.

81. Dow's Lorsban products were more dangerous than any reasonable consumer or end user would expect for the following reasons: (1) the active ingredients—chlorpyrifos and chlorpyrifos oxon—were highly toxic to the nervous systems of fetuses and infants; (2) chlorpyrifos and chlorpyrifos oxon caused developmental and chronic neurological deficits from repeated low-dose exposures even in the absence of acute poisoning events; and (3) the active ingredient that Dow disclosed to the public, chlorpyrifos, transformed into its much more toxic metabolite when mixed with chlorinated or brominated water, which the ordinary consumer or end user had no way of knowing. All of these hazards were known or knowable to Dow by 2002, but not known to ordinary consumers and end users.

82. In fact, Dow actively and maliciously took steps to conceal these hazards from the public, in all of the ways described in Count I, above. Throughout the 1990s and the 2000s, Dow worked hard to convince the public and ordinary consumers of its favored safety narrative, as summarized by a panel of "independent" researchers paid by Dow in 1997: "The available scientific evidence provides no basis for concern that [chlorpyrifos] causes human adverse health effects other than its known cholinergic effects associated with acute poisoning."

83. These design defects were the proximate cause of Rafael Jr.'s developmental and neurological injuries, including autism, ADHD, seizures, and mental retardation.

COUNT IV – NEGLIGENCE AS TO CITY OF HURON

84. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

85. California imposes a duty on utilities that furnish drinking water for human consumption to "provide water that is wholesome, potable, [and] in no way harmful or dangerous to health."

86. The City of Huron is a municipal corporation and political subdivision that owns and operates the Huron water treatment plant. The operation of the water treatment utility by the City of Huron is a classic example of a proprietary function, and it is therefore not entitled to any kind of sovereign immunity for harms caused by its operation of the water treatment plant.

87. The City of Huron has the same duty as all other water utilities to supply water that is "wholesome, potable, [and] in no way harmful or dangerous to health."

88. The City of Huron breached its duty to supply water that is "wholesome, potable, [and] in no way harmful or dangerous to health" by supplying water to Rafael Jr.'s mother and family and to Rafael Jr. that was contaminated with chlorpyrifos oxon and therefore toxic.

89. The City of Huron failed to exercise reasonable care in the following ways:

(i) By leaving portions of its treatment facility and filter backwash ponds exposed to the air and thereby exposed to drift and over-spray from aerial pesticide applications, including chlorpyrifos applications;

(ii) By failing to heed the July 2002 publication of the USDA and take extra precautions against invasion of its water system by chlorpyrifos oxon, such as extending chlorine treatment or pretreatment time to ensure the decomposition of chlorpyrifos oxon to less toxic chemicals, or increasing filtration capacity;

(iii) By using a below-standard direct filtration system for portions of its treated water output; and

(iv) By recycling filter backwash without pretreating it, reducing total chlorine contact time.

90. As a result of these acts and omissions, water supplied by the City of Huron for the purpose of human consumption was contaminated with chlorpyrifos oxon.

91. The City of Huron's negligence in the operation of its water treatment plant was a proximate cause of Rafael Jr.'s injuries.

COUNT V – NEGLIGENCE AS TO CITY OF AVENAL

92. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

93. California imposes a duty on utilities that furnish drinking water for human consumption to "provide water that is wholesome, potable, [and] in no way harmful or dangerous to health."

94. The City of Avenal is a municipal corporation and political subdivision that owns and operates the Avenal water treatment plant. The operation of the water treatment utility by the City of Avenal is a classic example of a proprietary function, and it is therefore not entitled to any kind of sovereign immunity for harms caused by its operation of the water treatment plant.

95. The City of Avenal has the same duty as all other water utilities to supply water that is "wholesome, potable, [and] in no way harmful or dangerous to health."

96. The City of Avenal breached its duty to supply water that is "wholesome, potable, [and] in no way harmful or dangerous to health" by supplying water to Rafael Jr.'s mother and family and to Rafael Jr. that was contaminated with chlorpyrifos oxon and therefore toxic.

97. The City of Avenal failed to exercise reasonable care in the following ways:

(i) By leaving portions of its treatment facility exposed to the air and thereby exposed to drift and over-spray from aerial pesticide applications, including chlorpyrifos applications; and

(ii) By failing to heed the July 2002 publication of the USDA and take extra precautions against invasion of its water system by chlorpyrifos oxon, such as extending chlorine treatment or pretreatment time to ensure the decomposition of chlorpyrifos oxon to less toxic chemicals, or increasing filtration capacity;

98. As a result of these acts and omissions, water supplied by the City of Avenal for the purpose of human consumption was contaminated with chlorpyrifos oxon.

99. The City of Avenal's negligence in the operation of its water treatment plant was a proximate cause of Rafael Jr.'s injuries.

COUNT VI – STRICT PRODUCTS LIABILITY – MANUFACTURING DEFECT

AS TO THE CITY OF HURON AND THE CITY OF AVENAL

100. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

101. The drinking water supplied by the City of Huron and the City of Avenal (collectively, the "Water Sellers") was sold to customers for human consumption. The manufacturing specifications for the drinking water did not include, allow for, or permit any chlorpyrifos or chlorpyrifos oxon.

102. Nonetheless, chlorpyrifos at times—especially after heavy rains following in the fall, following the typical chlorpyrifos application season of late summer and fall—infiltrated the Water Sellers' manufacturing facilities and got caught in the treatment plant, where the chlorine added by the Water Sellers converted the chlorpyrifos to chlorpyrifos oxon.

103. This chlorpyrifos oxon was present, at times, in the water sold by the Water Sellers to Rafael Jr.'s family at the point of sale (the meter) and consumption (the taps). The chlorpyrifos oxon present in the water was not intended and rendered the water unreasonably dangerous. The water sold by the Water Sellers was therefore defective under the law in containing a manufacturing defect.

104. The Water Sellers are liable for the harm caused by manufacturing defects even if they took reasonable care to prevent such defects (which they did not).

105. The manufacturing defect in the water sold by the Water Sellers was a proximate cause of Rafael Jr.'s injuries.

COUNT VII – NEGLIGENCE AS TO THE APPLICATOR DEFENDANTS

106. Plaintiffs re-allege and incorporate each paragraph above as if separately set forth herein.

107. Defendant Woolf Farming, Defendant "Applicator ID 1080390," Defendant "Applicator ID 1020351," and Defendant "Applicator ID 1020011" are collectively referred to herein as the "Applicator Defendants."

108. Upon information and belief, each of the Applicator Defendants negligently applied chlorpyrifos by aerial application in one or more of the following ways:

(1) By flying at too high of a height (greater than 10 feet) above the target plants, thus resulting in more significant spray drift and overspray;

(2) By using a combination of nozzles, pressure, airspeed, and nozzle angle that resulted in fine droplets, thus resulting in more significant spray drift and overspray;

(3) By applying with the aircraft traveling downwind and in conditions with excessive windspeeds, and failing to adjust properly for the wind and windspeeds;

(4) By failing to control droplet size and spraying smaller droplets, thus resulting in more significant spray drift and overspray; and

(5) By failing to observe proper setbacks for bodies of water or sensitive sites.

109. The negligent acts of Defendant Applicator ID 1020351 in, among other things referred to above, failing to control droplet size, observe proper spray heights and setbacks for sensitive sites, and adjust properly for windspeeds, resulted in excessive spray drift in and around the apartment where Rafael Jr.'s mother lived while she was pregnant and where Rafael lived during the first eight months or so of his life.

110. The negligent acts of Defendant Applicator ID 1020011 and Defendant Applicator ID 1080390 in, among other things referred to above, failing to control droplet size, observe proper spray heights and setbacks for bodies of water, and adjust properly for windspeeds, resulted in excessive spray drift in and around the California Aqueduct source water for the Huron and Avenal water systems. Chlorpyrifos entered the Huron and Avenal source water, was transformed to chlorpyrifos oxon, and was thereby consumed by Rafael Jr. or his mother.

111. The negligent acts of Woolf Farming in, among other things referred to above, failing to control droplet size, observe proper spray heights and setbacks for bodies of water, and adjust properly for windspeeds, resulted in excessive spray drift in and around the Huron water treatment facility and the open portions and filter backwash ponds on that site. Chlorpyrifos thereby entered the Huron treatment process, was transformed to chlorpyrifos oxon, and was thereby consumed by Rafael Jr.'s mother during her pregnancy and by Rafael during his infancy.

112. The negligence of each of the Applicator Defendants was therefore a proximate cause of Rafael Jr.'s exposure to chlorpyrifos and chlorpyrifos oxon and therefore his serious neurological injuries.

PRAYER FOR RELIEF AND DEMAND FOR JURY TRIAL

113. Wherefore, Plaintiffs respectfully pray for the following:

(1) General compensatory damages for the pain and suffering of Rafael Cerda Calderon resulting from his injuries due to chlorpyrifos and chlorpyrifos oxon exposure;

(2) Special compensatory damages for the loss in earning capacity suffered by Rafael Cerda Calderon resulting from his injuries due to chlorpyrifos and chlorpyrifos oxon exposure;

(3) Special compensatory damages for the past and future medical expenses and special needs and care for Rafael Cerda Calderon resulting from his injuries due to chlorpyrifos and chlorpyrifos oxon exposure;

(4) Compensatory damages for loss of consortium, mental anguish, and sorrow suffered by Rafael Cerda Calderon's parents;

(5) Punitive damages for the willful, reckless, and recklessly indifferent conduct of the Defendants, in an amount sufficient to deter such future conduct;

(6) Pre-judgment and post-judgment interest; and

(7) Such other relief as this Court may deem appropriate.

114. Plaintiffs demand a jury trial as to all issues.

DATED this 16th day of September 2020.

BONNETT, FAIRBOURN, FRIEDMAN & BALINT, P.C.

By: _____

PATRICIA N. SYVERSON (203111)
600 W. Broadway, Suite 900
San Diego, California 92101
Telephone: 619-798-4593
psyverson@bffb.com

BONNETT, FAIRBOURN, FRIEDMAN & BALINT, P.C
VAN BUNCH *(To be admitted Pro Hac Vice)*
2325 E. Camelback Road, Suite 300
Phoenix, AZ 85016
Telephone: (602) 274-1100
vbunch@bffb.com

As local counsel on behalf of:

CALWELL LUCE diTRAPANO PLLC
Stuart Calwell *(To be admitted Pro Hac Vice)*
L. Danté diTrapano *(To be admitted Pro Hac Vice)*
Alexander D. McLaughlin *(To be admitted Pro Hac Vice)*
D. Christopher Hedges *(To be admitted Pro Hac Vice)*
Law and Arts Center West
500 Randolph Street
Charleston, WV 25302
Telephone: (304) 343-4323
scalwell@cldlaw.com
dditrapano@cldlaw.com
amclaughlin@cldlaw.com
chedges@cldlaw.com

Counsel for Plaintiffs