

**VIETNAM VETERANS OF AMERICA
NEW JERSEY STATE COUNCIL
559 WEST 9TH AVENUE
ROSELLE, NJ 07203**

**AGENT ORANGE/DIOXIN COMMITTEE REPORT
SUNDAY, MARCH 31, 2019**

**MICHAEL ECKSTEIN, CHAIRMAN
OWEN MARTIN, VICE-CHAIRMAN**

TOWN HALL MEETING – Our next Town Hall Meeting is currently being scheduled for October 6, 2019 in Bordentown, NJ at the conclusion of that days State Council Meeting. The time for the Town Hall Meeting is not yet set. The place is the Senior Center in the Municipal Complex at - 3 MUNICIPAL DR., BORDENTOWN, NJ 08505.

PRESUMPTIVE ILLNESSES – This is my second year of printing this shameful bit of VA stalling. Will the VA finally decide to service connect the illnesses noted in the Senate Veterans Affairs Committee letter or continue to deny benefits and keep those veterans waiting and dying from that wait? There might be a breakthrough as we read this message. The VA is discussing adding the three presumptive illnesses that were supposed to have been done 2 1/2 years ago.

DOES IT EVER END? – The March 17, 2019 first page of the Star-Ledger's NJ section headline reads: "10 years later no priorities set on cleanup. DEP "non-compliant" with mandate to rank toxic sites in order of urgency". The rankings are only nine years late. Today, there are nearly 14,000 contamination sites across New Jersey. More than 8,500 sites have been cleaned up since 2009, but an investigation by WNYC in 2015 found that nearly ¾ of New Jersey residents who live below the poverty line were within a mile of a contaminated site

that had no cleanup plan. Surprising, isn't it?

BLUE WATER NAVY – More rumblings from the VA that there will not be a challenge to the courts striking down the denial of Agent Orange related benefits. It is about time.

1.

VA to Announce Decision on New Agent Orange Presumptive Conditions



A member of a U.S. Navy SEAL team uses caution as he watches for any movement in the thick wooded area along a stream in Vietnam in October 1968. Agent Orange and other defoliants were used to clear out vegetation that obscured enemy movements. National Archives & Records Administration photo

26 Mar 2019

Military.com | By [Patricia Kime](#)

Several years after a scientific body recommended that the [Department of Veterans Affairs](#) consider adding four conditions -- bladder cancer, hypothyroidism, hypertension and

Parkinson's-like symptoms -- to the list of qualifying diseases tied to [Agent Orange](#), affected veterans may soon find out whether they are eligible for disability compensation and VA health care.

During a Senate Veterans Affairs hearing Tuesday on the VA budget, Dr. Richard Stone, the executive in charge of the Veterans Health Administration, said a decision on the three illnesses likely would come in the next 90 days.



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Responding to a question from Sen. Sherrod Brown, D-Ohio, Stone said the VA is working "through this right now, and it would be my hope" to have a decision within three months. He added that the recommendation will go to VA Secretary Robert Wilkie for final approval.

"It's took this country far too long to come to terms with Agent Orange," Brown said.

Related content:

- [VA to Drop Fight Against Blue Water Navy Veterans](#)
- [Court Decides 'Blue Water' Navy Vets Should Be Eligible for Agent Orange Benefits](#)
- [House Launches Renewed Push for Blue Water Navy Bill](#)

In March 2016, the National Academy of Medicine found evidence that two conditions, bladder cancer and hypothyroidism, are likely linked to Agent Orange exposure and that a third condition, Parkinson-like symptoms, also should be included on the list of diseases presumed to be related to contact with the herbicide.

The announcement brought hope to thousands of veterans living with bladder cancer and thyroid problems, as well as those who have essential tremors and other symptoms similar to Parkinson's, but who haven't been diagnosed with the disease.

In late 2017, former VA Secretary Dr. David Shulkin said he had made a decision on whether to add the three conditions to the list of 14 Agent Orange-related illnesses, but it was never announced.

In November 2018, the National Academies of Sciences, Engineering and Medicine also released a report finding sufficient evidence to link high blood pressure with exposure to Agent Orange.

High blood pressure, or hypertension, previously had been designated as having limited or suggestive evidence that it is related to contact with Agent Orange. A National Academies committee, having reviewed new studies, upgraded the association to say there is "sufficient" evidence that ties the disease to exposure.

But high blood pressure is so common among older Americans that it has never been added to the presumptive list, even though the suggested evidence shows it may be tied to exposure.

The U.S. military sprayed millions of gallons of herbicides, including Agent Orange, in Vietnam to clear the jungle of foliage that obscured enemy movements.

More than 2.7 million veterans served in Vietnam. Veterans with health conditions connected to serving on the ground in Vietnam and inland waterways are eligible for health care and compensation from the VA.

A [legal decision announced in January](#) by the U.S. Court of Appeals for the Federal Circuit may extend those benefits to sailors and [Marines](#) who have qualifying diseases and were assigned to ships offshore.

The VA announced [Thursday it will not appeal the decision](#) by a federal judge to award benefits to the veterans, known as the Blue Water Navy.

-- Editor's Note: This story has been updated to list the four conditions under consideration.

-- Patricia Kime can be reached at Patricia.Kime@Military.com. Follow her on Twitter at [@patriciakime](https://twitter.com/patriciakime).

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September 22, 2017

The Honorable David J. Shulkin
Secretary of Veterans Affairs
810 Vermont Avenue, NW
Washington, DC 20420

Dear Secretary Shulkin,

We are writing you today to call on the Department of Veterans Affairs (VA) to provide a response to the recommendations made by the National Academy of Medicine's (NAM) *Veterans and Agent Orange, Update 2014*, regarding the association between Agent Orange exposure and Bladder Cancer, Hyperthyroidism, and Parkinson-like conditions.

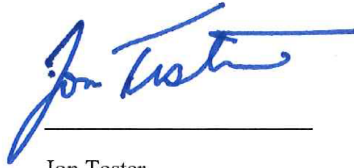
In March of 2016, the National Academy of Science released *Veterans and Agent Orange: Update 2014*, and under PL 102-4 the Secretary was required to take action on NAM recommendations within 60 days of receiving the report. Even though VA is no longer required to act within that timeframe, then Secretary McDonald said a response from VA's Agent Orange working group was imminent. The veterans suffering from these conditions are still in urgent need of critical health care and other benefits.

In November of 2016, VA once again stalled their response to the NAM recommendations leaving the final decision for proposing new rules and new presumptions to the incoming administration. In response to inquiries made by the Senate Committee on Veterans Affairs in February VA expressed that it completed internal reviews of the NAM recommendations and provided their own recommendations to the Secretary for review. When the Committee inquired again in June, VA said the decision was with the Secretary for review. As of this letter, a decision has not been made publically on these outstanding recommendations 19 months after NAM released their report. The care owed to our servicemembers should not be delayed and denied any longer. They fought for our country, were exposed to a toxic chemical while carrying out their daily duty, and in return, we are failing to provide medical care and disability compensation.

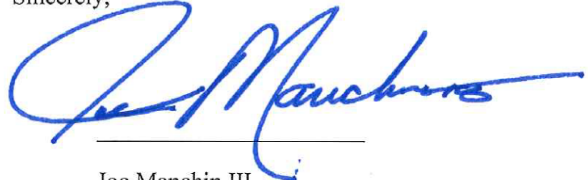
We urge VA to act on these recommendations and extend presumption for service connection for Bladder Cancer, Hyperthyroidism, and Parkinson-like conditions, in keeping with the recommendations made by NAM.

We thank you for your attention to this vital issue, and we look forward to working with you to resolve this matter promptly.

Sincerely,



Jon Tester
United States Senate



Joe Manchin III
United States Senate



Sherrod Brown
United States Senate



Bernard Sanders
United States Senate



Patty Murray
United States Senate

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**Veterans Exposed to
Agent Orange:**

Legislative History, Litigation, and Current Issues

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18,

2014

Congressional Research Service

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Summary

The U.S. Armed Forces used a variety of chemical defoliants to clear dense jungle land in Vietnam during the war. Agent Orange (named for the orange-colored identifying stripes on the barrels) was by far the most widely used herbicide during the Vietnam War. Many Vietnam-era veterans believe that their exposure to Agent Orange caused them to contract several diseases and caused certain disabilities, including birth defects in their children, and now their grandchildren.

The Department of Veterans Affairs (VA) received the first claims asserting conditions related to Agent Orange in 1977. Since then, Vietnam-era veterans have sought relief from Congress and through the judicial system. Beginning in 1979, Congress enacted several laws to determine whether exposure to Agent Orange in Vietnam was associated with possible long-term health effects and certain disabilities. The Veterans' Health Care, Training and Small Business Loan Act (P.L. 97-72) elevated Vietnam veterans' priority status for health care at VA facilities by recognizing a veteran's own report of exposure as sufficient proof to receive medical care, absent evidence to the contrary. The Veterans' Health Care Eligibility Reform Act of 1996 (P.L. 104-262) completely restructured the VA medical care eligibility requirements for all veterans. Under P.L. 104-262, a veteran does not have to demonstrate a link between a certain health condition and exposure to Agent Orange; instead, medical care is provided unless the VA determines that the condition did not result from exposure to Agent Orange. This authority was permanently authorized by the Caregivers and Veterans Omnibus Health Services Act of 2010 (P.L. 111-163).

Likewise, Congress passed several measures to address disability compensation issues affecting Vietnam veterans. The Veterans' Dioxin and Radiation Exposure Compensation Standards Act of 1984 (P.L. 98-542) required the VA to develop regulations for disability compensation to Vietnam veterans exposed to Agent Orange. In 1991, the Agent Orange Act (P.L. 102-4) established a presumption of service connection for diseases associated with herbicide exposure. P.L. 102-4 authorized the VA to contract with the Institute of Medicine (IOM) to conduct scientific reviews of the evidence linking certain medical conditions to herbicide exposure. Under this law, the VA is required to review the reports of the IOM and issue regulations, establishing a presumption of service connection for any disease for which there is scientific evidence of a positive association with herbicide exposure. Based on these IOM reports, currently 15 health conditions are presumptively service-connected.

Under current regulations, a servicemember must have actually set foot on Vietnamese soil or served on a craft in its rivers (also known as "brown water" veterans) to be entitled to the presumption of exposure to Agent Orange. Those who served aboard deep-water naval vessels (commonly referred to as "Blue Water Navy" veterans) do not qualify for presumption of service connections for herbicide-related conditions unless they can prove that the veteran's service included duty or visitation within the country of Vietnam itself, or on its inland waterways.

Recently, Vietnam-era veterans have increasingly expressed concerns about all types of medical issues occurring in their children, regardless of age, and in successive generations. Furthermore, they have asserted that more research should be done on paternally mediated birth effects, so that compensation policies might be developed similar to those that address maternally mediated birth effects of Vietnam-era progeny.

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Introduction

Almost four decades since the end of the Vietnam War, the controversy surrounding the spraying of an herbicide known as “Agent Orange” and the exposure of Vietnam-era veterans to this herbicide continues. Since the late 1970s, Vietnam-era veterans have voiced concerns about how exposure to Agent Orange may have affected their health and caused certain disabilities, including birth defects in their children, and now their grandchildren.¹ The Department of Veterans Affairs (VA) received the first claims asserting conditions related to Agent Orange in 1977. Since then, Vietnam-era veterans have made efforts to obtain disability compensation and health care from Congress and through the judicial system. In response to issues raised by Vietnam-era veterans, Congress has passed legislation to research the long-term health effects of Agent Orange on Vietnam veterans and to provide benefits and services to those who may have been exposed to it. In addition, the courts have addressed some concerns of Vietnam-era veterans.²

This report provides an overview of how Congress and the judiciary have addressed the concerns of Vietnam-era veterans and briefly describes some of the current issues raised by Vietnam-era veterans. This report should be read in conjunction with CRS Report R41405, *Veterans Affairs: Presumptive Service Connection and Disability Compensation*.

The first part of the report discusses previous legislative efforts to address health care and disability compensation issues of Vietnam-era veterans exposed to Agent Orange. The second part discusses litigation pertaining to Agent Orange. The last part of the report briefly addresses current major issues related to Agent Orange and Vietnam-era veterans. In addition, the appendixes contain three tables. **Table A-1** provides a summary of congressional action related to health care for Vietnam-era veterans. **Table B-1** provides a list of diseases and conditions that are presumptively service-connected with exposure to Agent Orange. Lastly, **Table B-2** provides a list of diseases and conditions not presumed to be service-connected.

What Is “Agent Orange”?

As part of a military strategy to remove foliage that provided cover for the enemy, to destroy enemy crops, and to destroy tall grasses and bushes from the perimeters of U.S. military bases, the U.S. military—from 1962 to 1971—sprayed tactical herbicides in combat military operations in Vietnam.³ The U.S. Air Force sprayed nearly 19 million gallons of herbicides in Vietnam, of

¹ Vietnam Veterans of America, *Vietnam Veterans of America Legislative Agenda & Policy Initiatives: 113th Congress*, February 2014, <http://vva.org/GovAffairs/VVALegAgenda.pdf>. Also see *The Vietnam Experience Study* conducted by the Centers for Disease Control and Prevention (CDC): “[D]uring the telephone interview, Vietnam veterans reported current and past health problems more frequently than did non-Vietnam veterans. The Vietnam veterans also reported more health problems among their children, including more birth defects, and more problems with impaired fertility.” <http://www.cdc.gov/nceh/veterans/default1c.htm>.

² *Vietnam-era* is defined as “the period beginning on February 28, 1961, and ending on May 7, 1975, in the case of a veteran who served in the Republic of Vietnam during that period. In all other cases it is the period beginning on August 5, 1964, and ending on May 7, 1975” (38 C.F.R. §3.2).

³ “In late 1961, a test program for evaluating tactical herbicides for vegetation control in South Vietnam was approved for the Air Force. With the full concurrence and support of the Republic of Vietnam and the Vietnamese Air Force, a project under the code name operation RANCH HAND was initiated. Operation RANCH HAND was the USAF [U.S. Air Force] operation responsible for the tactical fixed-wing aerial application of herbicides from UC-123 Aircraft. (continued...) ”

which at least 11 million gallons were Agent Orange—making it the most widely used herbicide in the war.⁴ “Agent Orange (so named because of orange color stripes on the barrels used to store and ship the chemical) was a 50-50 mixture of the herbicides 2,4,5-T and 2,4-D.”⁵ This mixture was contaminated with varying concentrations of numerous dioxins, including 2,3,7,8-tetrachlorodibenzo-pdioxin (TCDD) during the manufacturing process.⁶ This contaminant was shown to be highly toxic in animals, and it was implicated in birth defects seen in mice. However, its effects on humans have not been fully understood. It is important to note that “Agent Orange” and “dioxin” are not the same.⁷ For simplicity the term Agent Orange is used throughout this report.

Spraying of Agent Orange occurred over inland forests at the junction of the borders of Cambodia, Laos, and South Vietnam; inland jungles north and northwest of Saigon; mangrove forests on the southernmost peninsula of Vietnam; and mangrove forests along major shipping channels southeast of Saigon.⁸

Movement to Obtain Compensation and Health Care for Agent Orange Exposure

Initially, the Department of Defense (DOD) maintained that only a limited number of U.S. military personnel could be positively identified as having been exposed to Agent Orange in South Vietnam (e.g., the crews of aircraft that were used to spray herbicides). However, following the publication of a 1979 General Accounting Office (GAO, now called Government Accountability Office) report documenting ground troop exposure, DOD acknowledged that ground troops were also exposed to Agent Orange.⁹ Likewise, the Department of Veterans Affairs

(...continued)

Operation RANCH HAND began 7 January 1962, and terminated 7 January 1971.” (See Alvin L. Young, *The History of the US Department of Defense Programs for the Testing, Evaluation, and Storage of Tactical Herbicides*, U.S. Department of Defense, December 2006, p. 8.)

⁴ The different types of herbicide used by U.S. forces in Vietnam were identified by a code name referring to the color of the band around the 55-gallon drum that contained the chemical. These included Agents Orange, White, Blue, Purple, Pink, and Green. From 1962 to 1965, small quantities of Agents Purple, Pink, and Green were used in the defoliation program (National Academy of Sciences, Institute of Medicine, *Veterans and Agent Orange: Health Effects of Herbicides Used in Vietnam*, Washington, DC, 1994, p. 27).

⁵ National Academy of Sciences, Institute of Medicine, *Characterizing Exposure of Veterans to Agent Orange and Other Herbicides Used in Vietnam: Scientific Considerations Regarding a Request for Proposals for Research*, Washington, DC, 1997, p. 2. 2,4,5-T means 2,4,5-trichlorophenoxyacetic acid, and 2,4-D means 2,4-dichlorophenoxyacetic acid.

⁶ Ibid.

⁷ When reviewing and evaluating the available scientific evidence, the Institute of Medicine (IOM) of the National Academy of Sciences (NAS) reviews the statistical association between exposure to dioxin or to the herbicides used in Vietnam and various adverse health outcomes, and does not specifically review and evaluate the available scientific evidence regarding the statistical association between exposure to “Agent Orange” used in Vietnam and various adverse health outcomes. This comprehensive review by the IOM has been repeated at least every two years since 1994 and is authorized to continue until December 31, 2015. (The Department of Veterans Affairs Expiring Authorities Act of 2014 [P.L. 113-175] extended this authority until 2015.) *Veterans and Agent Orange* reviews by the IOM weigh the strengths and limitations of the complete body of epidemiologic evidence on herbicide exposure and manifestation of certain health outcomes.

⁸ U.S. Department of Veterans Affairs, *Agent Orange Claims - A Review RVS Handout*, May 2010, p. 7.

⁹ U.S. General Accounting Office, *U.S. Ground Troops in South Vietnam Were in Areas Sprayed with Herbicide* (continued...)

(VA) consistently took the position that because the long-term exposure to Agent Orange was unclear, and because of scientific uncertainty of the evidence linking Agent Orange to specific illnesses, it could not compensate veterans who alleged that exposure to Agent Orange had caused their diseases. In testifying before the House Committee on Veterans' Affairs, the then Administrator of Veterans Affairs stated:

Unless or until some such latent effects of Agent Orange or its derivative components are scientifically documented there are intrinsic limitations to VA's authority to allow these [Agent Orange] claims under current law. Though I cannot emphasize enough our policy to resolve reasonable doubt as to service incurrence of disabilities in favor of claimants, there is currently no medical basis upon which adverse health effects of late-post-exposure onset can be reasonably tied to Agent Orange.¹⁰

In December 1979, Congress passed the Veterans Health Programs Extension and Improvement Act of 1979 (P.L. 96-151) and directed the VA to investigate the long-term effects of dioxin exposure during the Vietnam War. In 1981, Congress passed the Veterans' Health Care, Training, and Small Business Loan Act of 1981 (P.L. 97-72) and required the VA to include the study of other environmental exposures that may have occurred during the Vietnam conflict. However, the VA never designed a protocol for conducting the study, and responsibility for conducting the study was transferred to the Centers for Disease Control and Prevention (CDC). In 1987, the CDC ceased attempts to produce a study and never released any findings.¹¹ Although Vietnam-era veterans continued to urge Congress to establish policies for health care and disability compensation (see text box "Eligibility for Health Care and Disability Compensation") for Agent Orange exposure, a lack of a substantial, scientific consensus on the potential health effects of Agent Orange in Vietnam veterans and their offspring impeded those efforts.

Eligibility for Health Care and Disability Compensation

Health Care

The Department of Veterans Affairs (VA), through the Veterans Health Administration (VHA), operates the nation's largest integrated direct health care delivery system. Veterans' medical care is a discretionary program, and eligibility for VA medical care is based on an array of factors including (but not limited to) veteran status, presence of service-connected disabilities or exposures (such as Agent Orange), income, status as a former prisoner of war (POW) or Purple Heart or Medal of Honor recipient.

Disability Compensation

A veteran may be eligible for disability compensation if (1) the veteran is disabled resulting from personal injury suffered or disease contracted in the line of duty, or for aggravation of a preexisting injury suffered or disease contracted in the line of duty, in the active military, naval, or air service, during a period of war and (2) if the veteran was discharged or released under conditions other than dishonorable from the period of service in which the injury was incurred. In general, to establish service connection for a disability, a veteran must submit (1) medical evidence of a current disability, (2) medical evidence, or in certain circumstances lay testimony, of in-service incurrence or aggravation of an injury or disease, and (3) medical evidence of a nexus between the current disability and the in-service disease or injury.

(...continued)

Orange, FBCD 80-23, 1979, <http://archive.gao.gov/f0302/110930.pdf>.

¹⁰ Statement of Max Cleland, Administrator of Veterans' Affairs in U.S. Congress, House Committee on Veterans' Affairs, Subcommittee on Medical Facilities and Benefits, *Oversight Hearing to Receive Testimony on Agent Orange*, 96th Cong., 2nd sess., February 25, 1980 (Washington: GPO, 1980), p. 11.

¹¹ James D. Ridgway, "The Splendid Isolation Revisited: Lessons from the History of Veterans' Benefits Before Judicial Review," *Veterans Law Review*, vol. 3 (2011), p. 207.

For more information on VA health care eligibility, see CRS Report R42747, *Health Care for Veterans: Answers to Frequently Asked Questions*, by Sidath Viranga Panangala and Erin Bagalman.

For more information disability compensation, see CRS Report RL34626, *Veterans' Benefits: Disabled Veterans*, by Umar Moulta-Ali et al.

Since the late 1970s and early 1980s, disability compensation policies and health care for possible adverse health outcomes pertaining to veterans exposed to Agent Orange have proceeded on two parallel tracks: through legislation and through the judicial system.¹²

Legislative Track

Health Care Services

In April 1970, Congress held the first of many hearings on the health effects of Agent Orange.¹³ Policy makers began to address the health concerns of Vietnam-era veterans in 1981 with the passage of the Veterans' Health Care, Training and Small Business Loan Act (P.L. 97-72). Since the enactment of P.L. 97-72, Congress has from time to time passed legislation to provide medical care to veterans—and to some of their offspring—who may have been exposed to Agent Orange. In particular, Congress has addressed specific health care concerns of male and female Vietnam-era veterans. These concerns typically involve adverse reproductive effects. For instance, for male veterans, service in Vietnam has been associated with one particular adverse reproductive outcome: spina bifida.¹⁴ However, among female veterans, Vietnam service has been associated with the risk of having children with a wide range of birth defects.¹⁵ Therefore, special programs have been established based on gender. **Table A-1** summarizes major legislation pertaining to health care for Vietnam-era veterans who served in Vietnam or other select locations.

Disability Compensation

In general, Congress has passed legislation to provide health care to Vietnam-era veterans and, when warranted, their children—even though according to the Institutes of Medicine (IOM)¹⁶ there was no definitive scientific evidence showing that the disorders treated were related to the exposure. Nevertheless, for the purposes of disability compensation, Congress and the VA have relied on scientific evidence concerning Agent Orange exposure during Vietnam service and

¹² It should be noted that some Vietnam-era veterans filed a class action lawsuit against several chemical companies claiming liabilities for disabilities that veterans believe were caused by exposure to herbicides used in Vietnam that were manufactured by these companies for military use. A discussion of this lawsuit is beyond the scope of this report.

¹³ U.S. Congress, Senate, Committee on Commerce, Subcommittee on Energy, Natural Resources, and the Environment, *Effects of 2,4,5-T and Related Herbicides on Man and the Environment*, 91st Cong., 2nd sess., April 7, 1970 (Washington: GPO, 1970).

¹⁴ National Academy of Sciences, Institute of Medicine, *Veterans and Agent Orange: Update 1996*, Washington, DC, 1996, p.10, found an association between herbicide exposure in Vietnam and an increased risk of spina bifida in children.

¹⁵ Han Kang et al., "Pregnancy Outcomes Among U.S. Women Vietnam Veterans," *American Journal of Industrial Medicine*, vol. 38, no. 4 (October 2000), pp. 447-454.

¹⁶ National Academy of Sciences, Institute of Medicine, *Veterans and Agent Orange: Health Effects of Herbicides Used in Vietnam*, Washington, DC, 1994, p.50.

diseases and conditions suspected to be associated with such exposure. Since the 1980s, two major laws have affected disability compensation policies of Vietnam-era veterans exposed to Agent Orange.

The Veterans' Dioxin and Radiation Exposure Compensation Standards Act of 1984 (P.L. 98-542) required the VA to develop regulations for disability compensation to Vietnam veterans who may have been exposed to Agent Orange. Veterans seeking compensation for a condition they thought to be related to herbicide exposure had to provide proof of a service connection that established the link between herbicide exposure and disease onset. P.L. 98-542 authorized disability compensation payments to Vietnam veterans for the skin condition chloracne, which is associated with herbicide exposure.

In 1991, the Agent Orange Act (P.L. 102-4)¹⁷ established a presumption of service connection for diseases associated with herbicide exposure (see text box “What is Presumption of Service Connection?”).¹⁸ The act directed the VA to “prescribe regulations providing that a presumption of service connection is warranted for [a] disease”¹⁹ when a positive statistical association exists between Agent Orange exposure and the occurrence of that disease in humans.²⁰ In making this determination, P.L. 102-4 authorized the VA to contract with the Institute of Medicine (IOM) of the National Academy of Sciences (NAS) to review and summarize the scientific evidence concerning the association between exposure to herbicides used in support of military operations in Vietnam during the Vietnam era and each disease suspected to be associated with such exposure. P.L. 102-4 mandated that IOM determine, to the extent possible, (1) whether there is a statistical association between the suspect diseases and herbicide exposure, taking into account the strength of the scientific evidence and the appropriateness of the methods used to detect the association; (2) the increased risk of disease among individuals exposed to herbicides during service in Vietnam during the Vietnam era; and (3) whether there is a plausible biological mechanism or other evidence of a causal relationship between herbicide exposure and the health outcome.²¹

What Is Presumption of Service Connection?

The application of statutory presumptions is one way the law helps veterans seek compensation for service-connected disabilities. In the context of the adjudication of VA compensation claims, a presumption relieves the veteran of the burden of producing evidence that directly establishes service connection for a specific condition. For example, if a veteran can show he served at a particular place and time, and later incurred a certain type of illness, the law will presume the illness was connected to military service. In other words, the onus is placed on the VA to show lack of connection. Congress and the VA have used presumptions to implement policy when scientific certainty

¹⁷ Codified at 38 U.S.C. §1116.

¹⁸ For a broader discussion of presumptive service connection, see CRS Report R41405, *Veterans Affairs: Presumptive Service Connection and Disability Compensation*, by Sidath Viranga Panangala, Daniel T. Shedd, and Umar Moulta-Ali.

¹⁹ 38 U.S.C. §1116(b).

²⁰ Ibid.

²¹ This comprehensive review by the IOM has been repeated at least every two years since 1994 and is authorized to continue until December 31, 2015. (The Department of Veterans Affairs Expiring Authorities Act of 2014 [P.L. 113-175] extended this authority until 2015.) *Veterans and Agent Orange* weighs the strengths and limitations of the complete body of epidemiologic evidence on herbicide exposure and manifestation of certain health outcomes. This review then assigns the investigated medical conditions to one of four categories ranging from “sufficient evidence of an association” to “limited or suggestive evidence of no association.” The latest update was based on studies published between October 2010 and September 2012, and was released in December 2013, available at <http://www.iom.edu/Reports/2013/Veterans-and-Agent-Orange-Update-2012.aspx>.

cannot be achieved in a timeframe necessary to address compensation of veterans for their health problems. Most presumptions are applied to chronic diseases or illnesses that manifest after a period of time following military service.

Sources: CRS Report R41405, Veterans Affairs: Presumptive Service Connection and Disability Compensation; and U.S. Congress, Senate Committee on Veterans' Affairs, VA Disability Compensation: Presumptive Disability Decision-Making, 111th Cong., 2nd sess., September 23, 2010 (Washington: GPO, 2011), p. 19.

The law requires the VA, within 60 days of receiving a report from IOM regarding the relationship between exposure to herbicides used in Vietnam during the Vietnam War and certain diseases, to consider whether a presumption of service connection is warranted for any of the diseases discussed in the report, as well as all other available sound medical and scientific information.²² Within 60 days of making such a determination, the VA is required to issue proposed regulations setting forth that determination. Within 90 days of issuing the proposed regulations, the VA must issue final regulations establishing a presumption of service connection for any disease for which there is scientific evidence of a positive association with herbicide exposure.²³ Once the VA has established a presumption of service connection for a certain disease or medical condition, a veteran who, during active military, naval, or air service, served in the Republic of Vietnam (or its inland waterways) during the Vietnam era shall be presumed to have been exposed during such service to Agent Orange, and a service connection for that disease or condition will be granted. Those who did not serve in in the Republic of Vietnam or its inland waterways could still establish service connection on a direct basis.²⁴ Based on the most recent IOM report, "Veterans and Agent Orange: Update 2012," the VA decided not to establish any new presumptions. **Table B-1** provides a list of diseases and conditions that are presumptively service-connected. The VA's authority to issue regulations establishing additional presumptions of service connection for diseases found to be associated with Agent Orange exposure will expire on September 30, 2015.²⁵

The Agent Orange Act of 1991 (P.L. 102-4) also mandated the VA to publish a notice when the VA determines that a presumption of service connection is not warranted.²⁶ On April 11, 2014, based on the 2010 and 2012 IOM reports on Agent Orange, the VA issued a notice that a presumption of service connection is *not* warranted for certain diseases and conditions based on exposure to herbicides used in Vietnam during the Vietnam era. **Table B-2** provides a list of diseases and conditions that are *not* presumptively service-connected.

Judicial Track

With regard to Agent Orange exposure and disability compensation, litigation has largely focused on two questions. First, which diseases are presumed to be caused by exposure to Agent Orange? Second, which veterans have been presumptively exposed to Agent Orange? These questions

²² 38 U.S.C. §1116(b)(2) .

²³ 38 U.S.C. §1116(c)(1)(A) and §1116(c)(2).

²⁴ 38 U.S.C. §1110 and 38 CFR 3.303(d).

²⁵ 38 U.S.C. §1116(e); (Section 201(d) of The Veterans Education and Benefits Expansion Act of 2001 (P.L. 107-103), extended VA's authority under Title 38 U.S.C. §1116(b) through September 30, 2015).

²⁶ 38 U.S.C. §1116(b) and (c).

have been resolved by two lines of cases. *Nehmer*²⁷ claims involve which diseases are presumed to be caused by exposure to Agent Orange, and *Haas*²⁸ claims involve which veterans have been presumptively exposed to the herbicide. This section provides a discussion of the laws, regulations, and court decisions that have emerged from these cases.

Nehmer v. U.S. Veterans' Administration

In 1986, numerous Vietnam veterans brought a class action lawsuit against the VA, arguing that their previous claims for service-connected compensation for disabilities allegedly caused by exposure to Agent Orange were improperly denied.²⁹ At the time, the VA had promulgated a rule that found only one disease, chloracne, associated with exposure to Agent Orange.³⁰ When promulgating this rule under the Veterans' Dioxin and Radiation Exposure Compensation Standards Act,³¹ the VA had used a stringent "cause and effect" test for determining which diseases would be associated with Agent Orange exposure.³² The veterans argued that the "cause and effect" standard was too stringent and contrary to the legislative intent of Congress.³³ In 1989, the U.S. District Court for the Northern District of California agreed and declared that the VA was required to use a more lenient "significant statistical association" standard when determining whether a disease is associated with Agent Orange exposure.³⁴ The court invalidated the VA regulations and voided all benefit denials made under those regulations.³⁵ In response to this court decision, Congress enacted the Agent Orange Act of 1991 in February of that year.³⁶

After the enactment of the Agent Orange Act of 1991, the parties from *Nehmer* entered into a Final Stipulation and Order (Final Stipulation) that established the actions that the VA would take in response to the 1989 court decision.³⁷ Most notably, the VA was required to issue new regulations regarding which diseases are associated with exposure to dioxin³⁸ under the Agent Orange Act of 1991 and then readjudicate the claims that were previously denied by the VA under the invalid regulations.³⁹ The Final Stipulation also stated that any benefits awarded upon such readjudication or adjudication shall be paid retroactively.⁴⁰ Generally, when claims are awarded based on a new regulation, the effective date of the award can be no earlier than the date in which

²⁷ *Nehmer v. U.S. Veterans' Admin.*, 712 F. Supp. 1404 (N.D. Cal. 1989).

²⁸ *Haas v. Nicholson*, 20 Vet. App. 257 (2006).

²⁹ *Nehmer v. U.S. Veterans' Admin.*, 712 F. Supp. 1404 (N.D. Cal. 1989).

³⁰ *Id.* at 1408. The VA's rule stated that "sound scientific and medical evidence does not establish a cause and effect relationship between dioxin exposure" and any other disease except for chloracne. *Id.*

³¹ P.L. 98-542.

³² *Nehmer v. U.S. Veterans' Admin.*, 712 F. Supp. 1404, 1409 (N.D. Cal. 1989).

³³ *Id.*

³⁴ *Id.* at 1420.

³⁵ *Id.* at 1423.

³⁶ P.L. 102-4, 105 Stat. 11 (1991).

³⁷ DEPARTMENT OF VETERANS AFFAIRS, *NEHMER TRAINING GUIDE 7* (February 10, 2011).

³⁸ Dioxin is the toxic ingredient found in Agent Orange and other similar herbicides.

³⁹ See *Nehmer v. U.S. Veterans' Admin.*, 32 F. Supp. 2d 1175, 1177 (N.D. Cal. 1999).

⁴⁰ *Id.*

the regulation came into effect; however, under the Final Stipulation, the effective date would be either the date the claim was filed or the date the disability arose, whichever was later.⁴¹

Clarifying the Scope of *Nehmer*

Following the Final Stipulation, the VA began to readjudicate the voided Agent Orange claims. However, the VA established a policy only to readjudicate claims in which the veteran had specifically alleged Agent Orange to be the cause of disease.⁴² The veterans again sued the VA, and in February 1999, the court clarified which compensation claims were voided by the 1989 decision.⁴³ The court again agreed with the veterans and struck down the VA's policy. The court noted that the 1989 decision "voided those decisions in which the disease or cause of death is later found – under valid Agent Orange regulation(s) – to be service connected."⁴⁴ Therefore, the 1989 decision voided all VA decisions in which the disease or condition is later found to be associated with Agent Orange, regardless of whether the veterans specifically alleged that their diseases were caused by Agent Orange.⁴⁵ Finally, later litigation clarified that the VA must pay the full retroactive benefit to the estates of deceased class members.⁴⁶

***Nehmer* Claims and the Sunset Provision of the Agent Orange Act**

In 2001, Congress extended the sunset date of the Agent Orange Act from September 30, 2002, to September 30, 2015, thus requiring the Secretary to continue issuing regulations designating service-connected diseases in response to scientific reports.⁴⁷ In 2003, the VA found Chronic Lymphocytic Leukemia (CLL) to be associated with Agent Orange exposure.⁴⁸ However, the VA did not readjudicate the prior claims of Vietnam veterans suffering from CLL and did not pay them retroactive benefits.⁴⁹ The VA contended that the Final Stipulation did not apply to diseases that it determined to be service-connected after September 30, 2002, the original sunset date of the Agent Orange Act of 1991.⁵⁰ In 2004, the plaintiff class, disputing this interpretation, filed a motion for clarification and enforcement of the Final Stipulation as to disease determinations made after September 30, 2002.

In 2005, the court again agreed with the veterans and rejected the VA's interpretation.⁵¹ The court stated that the extension of the sunset provision also extended the duration of the Final Stipulation.⁵² Therefore, so long as diseases are determined to be associated with dioxin under the

⁴¹ *Id.*

⁴² *Id.* at 1177-78 (N.D. Cal. 1999).

⁴³ *Id.*

⁴⁴ *Id.* at 1183.

⁴⁵ *Id.* at 1182-83.

⁴⁶ *Nehmer v. Veterans' Administration of the Government of the United States*, 284 F.3d 1158, 1162-63 (9th Cir. 2002).

⁴⁷ Veterans Education and Benefits Expansion Act of 2001, P.L. 107-103, §201.

⁴⁸ Disease Associated with Exposure to Certain Herbicide Agents: Chronic Lymphocytic Leukemia, 68 *Federal Register* 14567, 14569 (March 26, 2003).

⁴⁹ *Nehmer v. U.S. Department of Veterans Affairs*, 494 F.3d 846, 855 (9th Cir. 2007).

⁵⁰ *Id.* at 862.

⁵¹ *Id.* at 855.

⁵² The court noted that the "Stipulation and Order contains no hard deadline" and "does not cite the 10 year sunset provision of the Agent Orange Act." *Id.* at 862.

Agent Orange Act, the VA is required to readjudicate any previously denied claims for those conditions. The U.S. Court of Appeals for the Ninth Circuit in 2007 upheld the decision⁵³ and ordered the VA to readjudicate all prior claims related to CLL and to provide retroactive benefits on such claims.

On October 13, 2009, after reviewing an independent study by the Institute of Medicine, the VA announced that three additional conditions would be granted presumptive service connection as associated with exposure to Agent Orange.⁵⁴ On August 31, 2010, the VA published the final rule in the *Federal Register*, officially adding B-cell leukemias (such as hairy cell leukemia), Parkinson's disease, and ischemic heart disease to the list of conditions associated with exposure to dioxin.⁵⁵ Because these conditions were added pursuant to the Agent Orange Act, which does not expire until 2015, the VA is required to readjudicate any claims previously denied for these conditions in order to comply with the *Nehmer* Final Stipulation.⁵⁶

Blue Water Veteran Litigation

According to the Agent Orange Act of 1991, certain veterans of Vietnam have been presumptively exposed to Agent Orange.⁵⁷ If a veteran falls within such a presumption, he does not have the burden of proving that he was actually exposed to the herbicide in order to obtain disability compensation. According to the statute, if a veteran proves that he “served in the Republic of Vietnam” between January 9, 1962, and May 7, 1975, any disease determined to be associated with exposure to Agent Orange will “be considered to have been incurred in or aggravated by” his service in Vietnam.⁵⁸

The VA has interpreted this statutory language to include only veterans who have actually set foot on the landmass of Vietnam or served in the inland waterways of Vietnam (veterans who served in the inland waterways are generally known as “brown water” veterans).⁵⁹ Veterans who served on ships that remained off the coast of Vietnam (generally referred to as “Blue Water Navy” veterans) do not satisfy the test and are not considered to be presumptively exposed to Agent Orange.⁶⁰ This interpretation of the statute was challenged in court. Although the Court of Appeals for Veterans Claims (CAVC) found the VA's interpretation to be invalid,⁶¹ the Court of Appeals for the Federal Circuit overturned the CAVC's decision and, therefore, the VA's “foot-on-land” test remains the current standard.⁶² The following section provides the details of the litigation.

⁵³ *Nehmer v. U.S. Department of Veterans Affairs*, 494 F.3d 846 (9th Cir. 2007).

⁵⁴ See 75 *Federal Register* 53202 (August 31, 2010).

⁵⁵ *Id.*

⁵⁶ See *Nehmer v. U.S. Department of Veterans Affairs*, 494 F.3d 846 (9th Cir. 2007).

⁵⁷ 38 U.S.C. §1116(a)(1).

⁵⁸ *Id.*

⁵⁹ See 38 C.F.R. §3.307(a)(6)(iii).

⁶⁰ Blue water veterans can still receive disability compensation; however, to do so, they must provide evidence that shows they were actually exposed to the herbicide.

⁶¹ *Haas v. Nicholson*, 20 Vet. App. 257 (2006).

⁶² *Haas v. Peake*, 525 F.3d 1168 (Fed. Cir. 2008).

Haas v. Nicholson

In 2001, a Vietnam veteran, Jonathan Haas, applied for disability compensation for Type 2 Diabetes allegedly caused by his exposure to Agent Orange.⁶³ Mr. Haas claimed that he was entitled to a presumptive service connection because he “served in the Republic of Vietnam.”⁶⁴ Mr. Haas never physically went ashore to Vietnam but instead served on a U.S. vessel that remained off the coast during his service. Both the VA Regional Office and the Board of Veterans’ Appeals (BVA) denied Mr. Haas the presumption of service connection, stating that a veteran must have actually “set foot on land in the Republic of Vietnam” to qualify for a presumption of service connection for exposure to Agent Orange.⁶⁵ Mr. Haas appealed the decisions to the CAVC, arguing that his service off the coast of Vietnam should entitle him to a presumptive service connection based on his “service in the Republic of Vietnam.”⁶⁶

In 2006, the CAVC agreed with Mr. Haas and overturned the BVA’s decision. The CAVC found the regulation to be ambiguous and determined that the current interpretation conflicted with the agency’s earlier interpretations.⁶⁷ Furthermore, the court stated that the VA could not make such a change in its interpretation without undertaking proper notice and comment rulemaking procedures.⁶⁸ The CAVC also found the “foot-on-land” test to be an unreasonable interpretation of the law, and stated that there could be “the same risk of exposure” for veterans who served on ships near the coast.⁶⁹

As a result of the CAVC’s ruling, the VA directed the BVA to stay all proceedings involving Agent Orange exposure claims of veterans who only served on ships off the coast of Vietnam.⁷⁰ The VA also published a notice of proposed rulemaking in the *Federal Register* declaring its intent to clarify its interpretation.⁷¹ Finally, the VA also appealed the CAVC’s decision to the U.S. Court of Appeals for the Federal Circuit.

Haas v. Peake

On appeal, the case name was changed to *Haas v. Peake* after James Peake became the Secretary of Veterans Affairs. The U.S. Court of Appeals for the Federal Circuit reversed the decision of the CAVC, ruling in favor of the VA.⁷² As a result of this decision, the VA still maintains its “foot-on-land” policy for a Vietnam veteran to qualify for a presumption of exposure to Agent Orange.⁷³ Although “Blue Water” veterans can still receive compensation for Agent Orange exposure if they

⁶³ *Haas v. Nicholson*, 20 Vet. App. 257, 260 (2006).

⁶⁴ *Id.*

⁶⁵ *Id.* at 259.

⁶⁶ *Id.*

⁶⁷ *Id.* at 269–72.

⁶⁸ *Id.* at 275–78.

⁶⁹ *Id.* at 272–73.

⁷⁰ Memorandum No. 01-06-24, Subj: Processing of Claims for Compensation Based on Exposure to Herbicides Affected by *Haas v. Nicholson*—Imposition of Stay. Available at <http://www.bluewaternavy.org/vastaymemo.htm>.

⁷¹ See 72 *Federal Register* 66218 (November 27, 2007).

⁷² *Haas v. Peake*, 525 F.3d 1168 (2008).

⁷³ See 38 C.F.R. §3.307(a)(6)(iii).

prove they were actually exposed to Agent Orange, they will not receive a presumption of exposure due to their service.

Throughout its opinion, the court reversed each basis of the CAVC's ruling. The court stated that the agency's interpretation of the statute was due deference under the *Chevron* doctrine.⁷⁴ The court found the "foot-on-land" rule to be a reasonable interpretation of the statute, noting that Congress had been silent regarding the scope of the statutory language, and stated that the VA's interpretation was a reasonable line to draw.⁷⁵ The court also noted that the agency had consistently applied this interpretation for an extended period of time.⁷⁶ Finally, the court declared that because this was an interpretive rule, not a substantive rule, the agency did not have to follow notice and comment rulemaking procedures when promulgating its interpretation.⁷⁷ Therefore, there was no violation of the Administrative Procedure Act.⁷⁸ The court reversed the CAVC decision and remanded the case. Although it ruled in favor of the VA, the court noted that Mr. Haas was free to "pursue his claim that he was actually exposed to herbicides while on board his ship.... However, he [was] not entitled to the benefit of the presumptions set forth in [the Agent Orange Act of 1991]."⁷⁹ The Supreme Court of the United States denied certiorari on Mr. Haas's appeal.⁸⁰

Current Issues

Currently, three major issues pertain to Vietnam-era veterans and their exposure to Agent Orange: (1) providing presumptive service-connected disability compensation for those who served in the waters surrounding Vietnam and in other areas that Agent Orange may have been stored or used; (2) providing disability compensation and health care for paternally mediated birth defects;⁸¹ and (3) researching and providing disability compensation and health care services to biological grandchildren and later generations of Vietnam-era veterans. Each of the three issues is briefly discussed in detail.

Veterans Potentially Exposed to Agent Orange in Areas Outside Vietnam

Under current law, veterans who have diseases or conditions listed in **Table B-1** are entitled to service-connected disability compensation as long as they (1) stepped foot on land in Vietnam *or*

⁷⁴ *Id.* at 1186; *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984).

⁷⁵ *Id.* at 1193 ("In our view, it was not arbitrary for the agency to limit the presumptions of exposure and service connection to servicemembers who had served, for some period at least, on land. Drawing a line between service on land, where herbicides were used, and service at sea, where they were not, is *prima facie* reasonable.").

⁷⁶ *Id.*

⁷⁷ *Id.* at 1196.

⁷⁸ *Id.*

⁷⁹ *Id.* at 1197.

⁸⁰ *Haas v. Peake*, 555 U.S. 1149 (2009).

⁸¹ Associates of Vietnam Veterans of America (AVVA), "Paternally Mediate Birth Defects," Presentation Before the IOM Committee to Review the Health Effects in Veterans of Exposure to Herbicides, January 16, 2013, <http://www.iom.edu/~media/Files/Activity%20Files/Veterans/AgentOrangeNinthUpdate/Mtg%204%20Presentations/Elayne%20Mackey%20Statement.pdf>.

(2) served on the inland waterways of Vietnam during active duty at any time between January 9, 1962, and May 7, 1975. Other veterans who have an Agent Orange-related disease or condition are entitled to these benefits if they can prove they were exposed to Agent Orange during active duty service. However, there are some exceptions to this general requirement (see text box on “Presumption of Exposure to Agent Orange in Veterans who served in Korea”).

Presumption of Exposure to Agent Orange in Veterans Who Served in Korea

On January 25, 2011, VA issued final regulations that took effect as of February 24, 2011, ~~establishing~~ establishing a presumption of herbicide exposure for veterans who served in the active military, naval, or air service in or near the Korean demilitarized zone (DMZ), as determined by VA and Department of Defense (DOD) during the period beginning on September 1, 1967, and ending on August 31, 1971. When service records show that a veteran was assigned to one of the units identified by DOD, during the time frame of tactical herbicide use, the veteran qualifies for the presumption of exposure. These veterans are eligible to receive disability compensation for a disease on the list of diseases subject to presumptive service connection due to the exposure to herbicides.⁸²

Furthermore, only veterans who served in Vietnam are entitled to retroactive benefits. As discussed under the **“Blue Water Veteran Litigation”** section, some veterans of the Vietnam era who served aboard deep-water naval vessels off the coast of Vietnam—referred to as “Blue Water Navy” veterans—have been pressing Congress and the judicial system to expand the definition of service in Vietnam, thereby qualifying this group to receive disability compensation for diseases or conditions presumed to be associated with Agent Orange. These veterans contend that they were exposed to Agent Orange while on board vessels anchored offshore, either directly through contact with aircraft that sprayed Agent Orange or while handling drums of Agent Orange or by drinking distilled water.⁸³

In late 2009, the VA asked the Institute of Medicine (IOM) to conduct a study and prepare a report on whether Vietnam-era veterans who served in the waters off Vietnam (“Blue Water Navy” veterans) or who served on boats or ships that operated on the inland waterways and delta areas of Vietnam (“brown water” navy veterans) experienced a comparable range of exposures to Agent Orange as the veterans who served on the ground. In 2011, IOM announced that it was unable to determine whether “Blue Water Navy” veterans were exposed to Agent Orange. IOM’s report stated:

The committee was unable to state with certainty that Blue Water Navy personnel were or were not exposed to Agent Orange and its associated [2,3,7,8-Tetrachlorodibenzo-p-Dioxin] TCDD. Owing to a lack of data on environmental concentrations of Agent Orange and Agent Orange-associated TCDD and an inability to reconstruct likely concentrations, as well as the dearth of information about relative exposures among the ground troops and Brown Water Navy personnel and Blue Water Navy personnel, it is impossible to compare actual exposures across these three populations. Furthermore, the committee concludes that because of the small number of studies and their limitations, there is no consistent evidence to suggest that Blue Water Navy Vietnam veterans were at higher or lower risk for cancer or other long-term adverse health effects associated with Agent Orange exposure than shore-based veterans, Brown Water Navy veterans, or Vietnam veterans in other branches of

⁸² Department of Veterans Affairs, “Herbicide Exposure and Veterans With Covered Service in Korea,” 76 *Federal Register* 4245-4250, January 25, 2011.

⁸³ Board of Veterans Appeals, Docket No. 09-47 333 (2011). Some ships converted seawater to drinking water through distillation.

service. The committee's judgment is that exposure of Blue Water Navy Vietnam veterans to Agent Orange-associated TCDD cannot reasonably be determined.⁸⁴

In addition, several groups of Vietnam-era veterans have asserted that they may have been exposed to Agent Orange based on storage and transportation of Agent Orange. For example, veterans have contended that they came into contact with Agent Orange on Guam in the late 1960s during the Vietnam War.⁸⁵ Moreover, some veterans have asserted that Agent Orange had been used in testing performed in the Panama Canal Zone in the 1960s and 1970s,⁸⁶ and others have contended that they were exposed during storage at Johnston Island in the North Pacific between 1971 and 1977.⁸⁷ Furthermore, some Vietnam-era veterans have asserted that they were exposed to Agent Orange in C-123 airplanes used after the Vietnam War.⁸⁸ All these veterans groups have sought to establish a presumption of exposure, thereby qualifying them to receive disability compensation for diseases or conditions presumed to be associated with Agent Orange. The VA is reviewing all these claims on a case-by-case basis.

Paternally Mediated Birth Defects

Currently, the VA provides disability compensation and health care services for only one paternally mediated birth defect: spina bifida in the children of male Vietnam-era veterans. Nevertheless, the VA provides disability compensation and health care for a range of maternally mediated birth defects in children of female Vietnam-era veterans.⁸⁹ This more liberal compensation for female Vietnam-era veterans was based on the results of a health study of 8,280 women Vietnam-era veterans (half of whom served in the Republic of Vietnam and half of whom served elsewhere), completed in October 1998 and titled "Women Vietnam Veterans Reproductive Outcomes Health Study." This study was conducted by the Environmental Epidemiology Service of the Veterans Health Administration of the VA.⁹⁰

The most recent 2012 Agent Orange report from IOM stated that there was inadequate or insufficient evidence to determine whether an association exists between exposure to Agent Orange and birth defects in the offspring of male Vietnam-era veterans.⁹¹ However, some veteran

⁸⁴ National Academy of Sciences, Institute of Medicine (IOM), *Blue Water Navy Veterans and Agent Orange Exposure*, Washington, DC, 2011, pp. 13-14.

⁸⁵ Board of Veterans Appeals, Docket No. 09-11 315 (2010).

⁸⁶ Board of Veterans Appeals, Docket No. 05-19 039 (2010).

⁸⁷ Board of Veterans Appeals, Docket No. 08-03 699 (2011).

⁸⁸ United States Air Force School of Aerospace Medicine (USAFSAM), *Consultative Letter, AFRL-SA-WP-CL-2012-0052, UC-123 Agent Orange*, April 27, 2012, http://airforcemedicine.afms.mil/idc/groups/public/documents/afms/ctb_213571.pdf. Also see, Steve Vogel, "Agent Orange's reach beyond the Vietnam War; Senators help push VA compensation for those who weren't in Vietnam but say Agent Orange caused illnesses," *Washington Post*, August 8, 2013; and Steve Vogel, "Ailing vets point to Vietnam-era cargo planes," *Washington Post*, August 4, 2013, pp. A-01.

⁸⁹ Covered birth defects include but are not limited to the following: (1) Achondroplasia; (2) Cleft lip and cleft palate; (3) Congenital heart disease; (4) Congenital talipes equinovarus (clubfoot); (5) Esophageal and intestinal atresia; (6) Hallerman-Streiff syndrome; (7) Hip dysplasia; (8) Hirschprung's disease (congenital megacolon); (9) Hydrocephalus due to aqueductal stenosis; (10) Hypospadias; (11) Imperforate anus; (12) Neural tube defects (including spina bifida, encephalocele, and anencephaly); (13) Poland syndrome; (14) Pyloric stenosis; (15) Syndactyly (fused digits); (16) Tracheoesophageal fistula; (17) Undescended testicle; and (18) Williams syndrome (38 C.F.R. §3.815).

⁹⁰ Department of Veterans Affairs, "Monetary Allowances for Certain Children of Vietnam Veterans; Identification of Covered Birth Defects," 67 *Federal Register* 200, January 2, 2002.

⁹¹ National Academy of Sciences, Institute of Medicine, *Veterans and Agent Orange: Update 2012*, Washington, DC, (continued...)

service organizations have asserted that more research should be done regarding paternally mediated birth defects and that eventually disability compensation policies should be developed for disabilities and health conditions that appear in later generations.⁹²

Disability Compensation and Health Care for Later Generations

Some Vietnam-era veterans have raised concerns that the genetic effects of Agent Orange may skip a generation and reappear in third or subsequent generations. In November 2010, some veterans made presentations to the IOM, requesting that it assess the “transgenerational effects resulting from exposure-related epigenetic changes, either in the parents or exposed fetuses, which would lead to adverse health effects in later generations, such as grandchildren.”⁹³ During previous reviews of Agent Orange studies, the IOM focused “only on birth defects (primarily limited to problems detectable at birth or within the first year of life) and childhood cancers (usually restricted to particular cancers that characteristically appear in infants and children and are diagnosed before the age of 18 years).”⁹⁴ However, beginning with the 2010 review, the IOM extended its focus to include all types of medical conditions occurring in Vietnam-era veterans’ children, regardless of age, and to include such conditions in successive generations.⁹⁵ According to the most recent 2012 Agent Orange report from IOM, there is inadequate or insufficient evidence to determine whether an association exists between exposure to Agent Orange and specific health issues such as endometriosis; semen quality; infertility; spontaneous abortion; stillbirth; late fetal, neonatal, or infant death; low birth weight or preterm delivery; birth defects other than spina bifida; childhood cancers; or diseases in more mature offspring or later generations.⁹⁶ However, the report from IOM states that

The committee [the IOM Agent Orange study committee] favors renewed efforts to conduct epidemiologic studies on all the developmental effects in offspring that may be associated with *paternal exposure*. In addition, new studies should evaluate offspring for *defined clinical health conditions that develop later in life*, focusing on organ systems that have shown the greatest effects after maternal exposure, including neurologic, immune, and endocrine effects. Finally, although the committee recognizes that there is evidence that environmental exposures can affect later generations through fetal and germ-line modifications, epidemiologic investigation designed to associate toxicant exposures with health effects manifested in later generations will be even more challenging to conduct than research on adverse effects on the first generation.⁹⁷

(...continued)

2014, p. 555, available at <http://www.iom.edu/Reports/2013/Veterans-and-Agent-Orange-Update-2012.aspx>.

⁹² See, Associates of Vietnam Veterans of America (AVVA) Presentation Before the IOM Committee to Review the Health Effects in Veterans of Exposure to Herbicides On Paternally Mediated Birth Defects, January 16, 2013, available at <http://www.avva.org/documents/AVVAPresentation.pdf>.

⁹³ National Academy of Sciences, Institute of Medicine, *Veterans and Agent Orange: Update 2010*, Washington, DC, 2011, p. 593.

⁹⁴ National Academy of Sciences, Institute of Medicine, *Veterans and Agent Orange: Update 2012*, Washington, DC, 2014, p. 598, available at <http://www.iom.edu/Reports/2013/Veterans-and-Agent-Orange-Update-2012.aspx>.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Ibid., p. 777.

Appendix A. Health Care Legislation for Vietnam Veterans

Table A-I. Summary of Major Health Care Legislation for Vietnam-Era Veterans and Their Offspring

Law	Program Established or Affected	Description	Notes
Veterans' Health Care, Training and Small Business Loan Act (P.L. 97-72)	Special treatment authority for Vietnam-era veterans who served in the Republic of Vietnam.	Authorized the VA to provide certain health care services to any veteran of the Vietnam era (August 5 1964, through May 7 1975) who, while serving in the Republic of Vietnam, may have been exposed to dioxin or to a toxic substance in an herbicide or defoliant used for military purposes. Health care services were not authorized for the care of conditions found to have resulted from a cause other than exposure to these substances.	
The Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 1997 (P.L. 105-16)	Benefits for Certain Children of Vietnam Veterans—Spina Bifida.	Authorized the VA to provide children with the birth defect spina bifida born to Vietnam veterans certain benefits and services, including monetary allowance, health care, and vocational training and rehabilitation. Health care services were limited only to health care that was needed to treat spina bifida and associated conditions.	A birth child of a Vietnam veteran (both men and women veterans), regardless of age or marital status, who was conceived after the date on which the Vietnam veteran first entered the Republic of Vietnam, during the period beginning January 9, 1962, and ending May 7, 1975, with the birth defect spina bifida, is eligible to receive benefits and services through the VA.

Law	Program Established or Affected	Description	Notes
The Veterans' Health Care Eligibility Reform Act of 1996 (P.L. 104-262)	Special treatment authority for Vietnam-era veterans who served in the Republic of Vietnam.	Authorized the VA to provide health care services to Vietnam-era herbicide-exposed veterans notwithstanding that there is insufficient medical evidence to conclude that their disabilities were associated with exposure to herbicides while serving in Vietnam.	Superseded the provisions of previous acts pertaining to priority treatment of Vietnam-era veterans. To be eligible for care, a Vietnam-era veteran must have served in the Republic of Vietnam or served in a unit stationed along the Korean demilitarized zone (DMZ) between April 1, 1968, and August 31, 1971, and have a disease or condition that is presumed to be service-connected or any disease or condition that may have been caused by exposure to herbicides. However, care is not provided for diseases and conditions identified by the Institute of Medicine (IOM) as having "limited/suggestive" evidence of no association between the occurrence of the disease and exposure to an herbicide. ^a
Veterans Programs Enhancement Act of 1998 (P.L. 105-369)	Special treatment authority for Vietnam-era veterans who served in the Republic of Vietnam.	Treatment authority authorized by P.L. 105-369 was extended through 2001.	
Veterans Benefits and Health Care Improvement Act of 2000 (P.L. 106-380)	Children of Women Vietnam Veterans (CWV) Health Care Program	Authorized the VA, effective December 1, 2001, to provide certain benefits, including a monthly monetary allowance, and health care for children with certain birth defects who were born to women veterans who served in the Republic of Vietnam during the Vietnam era. ^b	A birth child of a woman Vietnam-era veteran, regardless of age or marital status, conceived after the date on which the veteran first served in the Republic of Vietnam during the Vietnam era (February 28, 1961–May 7, 1975).
Department of Veterans Affairs Health Care Programs Enhancement Act of 2001 (P.L. 107-135).	Special treatment authority for Vietnam-era veterans who served in the Republic of Vietnam.	Treatment authority authorized by P.L. 107-135 was extended through 2002.	Although this special treatment authority lapsed in 2002, the VA continued to treat these veterans.

Law	Program Established or Affected	Description	Notes
Veterans Benefits Act of 2003 (P.L. 108)	Benefits for Certain Children of Veterans with Covered Service in Korea—Spina Bifida	Authorized the VA to provide children with the birth defect spina bifida born to veterans with covered service in Korea certain benefits and services, including monetary allowance, health care, and vocational training and rehabilitation. Health care services were limited only to health care that was needed to treat spina bifida and associated conditions.	A birth child of a Korea veteran (both men and women veterans), regardless of age or marital status, who was conceived after the date on which the Korea veteran first served in or near the Korean demilitarized zone, during the period beginning September 1, 1967, and ending August 31, 1971, with the birth defect spina bifida, is eligible to receive benefits and services through the VA.
The Veterans' Mental Health and Other Care Improvements Act of 2008 (P.L. 111)	Benefits for Certain Children of Vietnam Veterans and with Covered Service in Korea—Spina Bifida.	Authorized the VA to furnish comprehensive health care services to beneficiaries born with spina bifida.	<p>This program now covers comprehensive health care that is considered medically necessary and appropriate, and is not limited to health care that is needed to treat spina bifida and associated conditions.</p> <p>To be eligible to receive health care, the child must be eligible to receive a monthly monetary allowance. For eligible beneficiaries, the VA assumes full responsibility for the cost of medical services, and the VA directly reimburses the providers. Generally, care is provided in the private sector, but in some instances, services may also be obtained from VA health care facilities on a space available basis.</p>
The Caregivers and Veterans Omnibus Health Services Act of 2010 (P.L. 112)	Special treatment authority for Vietnam-era veterans who served in the Republic of Vietnam.	Provided permanent authorization for special treatment authority authorized by P.L. 104-262.	

Source: Congressional Research Service (CRS) analysis of legislation and federal regulations.

- a. "Limited/suggestive" evidence of no association is when several adequate studies, covering the full range of levels of exposure that human beings are known to encounter, are consistent in not showing a positive association between any magnitude of exposure to herbicides and the outcome of disease.
- b. Covered birth defects include, but are not limited to, the following: (1) Achondroplasia; (2) Cleft lip and cleft palate; (3) Congenital heart disease; (4) Congenital talipes equinovarus (clubfoot); (5) Esophageal and intestinal atresia; (6) Hallerman-Streiff syndrome; (7) Hip dysplasia; (8) Hirschprung's disease (congenital megacolon); (9) Hydrocephalus due to aqueductal stenosis; (10) Hypospadias; (11) Imperforate anus; (12)

Neural tube defects (including spina bifida, encephalocele, and anencephaly); (13) Poland syndrome; (14) Pyloric stenosis; (15) Syndactyly (fused digits); (16) Tracheoesophageal fistula; (17) Undescended testicle; and (18) Williams syndrome (38 C.F.R. §3.815).

Appendix B. Diseases and Conditions Presumed/Not Presumed to Be Service-Connected with Exposure to Agent Orange

Table B-1. Diseases and Conditions Presumptively Service-Connected with Exposure to Agent Orange

Disease or Condition	Year of IOM Findings	Year of VA Service Connection	Notes
Sufficient Evidence of Association			
Chloracne	1994	1985	Must have occurred, to a degree that is at least 10% disabling, within one year of the last day the veteran served in Vietnam
Non-Hodgkin's lymphoma	1994	1990	Does not include osteosarcoma, chondrosarcoma, Kaposi's sarcoma, or mesothelioma
Soft tissue sarcoma	1994	1991	
Hodgkin's disease	1994	1994	
Chronic lymphocytic leukemia (CLL) ^a	2003	2004	
Chronic B-cell leukemias including hairy cell leukemia	2009	2010	
Limited or Suggestive Evidence of Association.			
Respiratory cancers—lung, bronchus, larynx, or trachea	1994	1994	
Prostate cancer	1996	1996	
Multiple myeloma	1994	1994	
Porphyria cutanea tarda	1994	1994	Must have occurred, to a degree that is at least 10% disabling, within one year of the last day the veteran served in Vietnam
Early-onset peripheral neuropathy	1996	1996	Previous regulations required that the condition must appear within weeks or months of exposure and resolves within two years of the date of onset. On September 6, 2013, VA issued regulations to remove this requirement.

Disease or Condition	Year of IOM Findings	Year of VA Service Connection	Notes
Spina bifida in the children of veterans	1996	1997 (established by Congress)	The Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 97 (P.L. 104-204) provided benefits to certain children of Vietnam veterans who were born with spina bifida.
Type 2 diabetes	2000	2001	
Some birth defects in the children of female veterans ^b	None ^c	2001 (established by Congress)	The Veterans Benefits and Health Care Improvement Act of 2000 (P.L. 106-99) required the VA to identify and establish birth defects through regulations.
AL amyloidosis	2007	2009	
Amyotrophic lateral sclerosis (ALS)	2006	2008	This presumptive condition is not limited to veterans who were potentially exposed to Agent Orange. To be eligible for this presumptive service connection, a veteran must have served on continuous active duty for a period of 90 days or more.
Ischemic heart disease ^d	2009	2010	
Parkinson's disease	2009	2010	

Source: Based on National Academy of Sciences, Institute of Medicine, Veterans and Agent Orange: Update 2010, Washington, DC, 2012, p. 15; U.S. Congress, House Committee on Veterans' Affairs, *Health Effects of the Vietnam War-The Aftermath*, 111th Cong., 2nd sess., May 10, 2010 (Washington: GPO, 2010), p. 55; CRS Report R41405, Veterans Affairs: Presumptive Service Connection and Disability Compensation, by Sidath Viranga Panangala, Daniel T. Shedd, and Umar Moulta-Ali; and Congressional Research Service (CRS) analysis of VA regulations.

- a. 38.C.F.R. §3.309(e). In 2003, based on the 2002 update of the IOM report Veterans and Agent Orange, the VA issued a regulation designating chronic lymphocytic leukemia ("CLL") and other medical conditions as diseases associated with dioxin. CLL was therefore to be considered "service connected." However, the VA did not readjudicate prior claims for CLL, nor did it pay retroactive benefits, arguing that compensation was not applicable to diseases determined to be service-connected after September 20, 2002, the original sunset date of the Agent Orange Act of 1991. Following extensive litigation, the U.S. Court of Appeals for the Ninth Circuit (*Nehmer v. VA*, 494 F.3d 846 (9th Cir. Cal. 2007)) affirmed the district court decision (*Nehmer v. VA*, 32 F.Supp. 2d 1175 (N.D. Cal. 1999)) and, in effect, confirmed that the VA was obligated to pay disability benefits to all "Agent Orange" veterans with CLL, including those diagnosed after September 20, 2002.
- b. Covered birth defects include, but are not limited to, the following: (1) Achondroplasia; (2) Cleft lip and/or cleft palate; (3) Congenital heart disease; (4) Congenital talipes equinovarus (clubfoot); (5) Esophageal and intestinal atresia; (6) Hallerman-Streiff syndrome; (7) Hip dysplasia; (8) Hirschprung's disease (congenital megacolon); (9) Hydrocephalus due to aqueductal stenosis; (10) Hypospadias; (11) Imperforate anus; (12) Neural tube defects (including spina bifida, encephalocele, and anencephaly); (13) Poland syndrome; (14) Pyloric stenosis; (15) Syndactyly (fused digits); (16) Tracheoesophageal fistula; (17) Undescended testicle; and (18) Williams syndrome (38 C.F.R. §3.815).

- c. Based on a health study completed in October 1998 titled “Women Vietnam Veterans Reproductive Outcomes Health Study,” conducted by VA of 8,280 women Vietnam-era veterans.
- d. Ischemic heart disease does not include hypertension or peripheral manifestations of arteriosclerosis such as peripheral vascular disease or stroke, or any other condition that does not qualify within the generally accepted medical definition of Ischemic heart disease.

Table B-2. Diseases and Conditions Not Presumed to Be Service-Connected to Agent Orange

Diseases and Conditions
(1) Cancers of the oral cavity (including lips and tongue), pharynx (including tonsils), and nasal cavity (including sinuses)
(2) Cancers of the pleura, mediastinum, and other unspecified sites within the respiratory system and intrathoracic organs
(3) Cancers of the digestive organs (esophageal cancer; stomach cancer; colorectal cancer, including small intestine and anus; hepatobiliary cancers, including liver, gallbladder, and bile ducts; and pancreatic cancer)
(4) Bone and joint cancer
(5) Melanoma
(6) Nonmelanoma skin cancer (basal cell and squamous cell)
(7) Breast cancer
(8) Cancers of the reproductive organs (cervix, uterus, ovary, testes, and penis, excluding prostate)
(9) Urinary bladder cancer
(10) Renal cancer (kidney and renal pelvis)
(11) Cancers of the brain and nervous system (including eye)
(12) Endocrine cancers (including thyroid and thymus)
(13) Leukemia (other than all chronic B-cell leukemias including chronic lymphocytic leukemia and hairy cell leukemia)
(14) Cancers at other and unspecified sites (other than those as to which the Secretary has already established a presumption)
(15) Reproductive effects (including infertility; spontaneous abortion other than after paternal exposure to Tetrachlorodibenzo-p-Dioxin [TCDD]; and—in offspring of exposed people—neonatal death, infant death, stillborn, low birth weight, birth defects [other than spina bifida], and childhood cancer [including acute myeloid leukemia])
(16) Neurobehavioral disorders (cognitive and neuropsychiatric)
(17) Neurodegenerative diseases (excluding amyotrophic lateral sclerosis [ALS] ^a and Parkinson’s disease ^b)
(18) Chronic peripheral nervous system disorders (other than early-onset peripheral neuropathy)
(19) Respiratory disorders (wheeze or asthma, chronic obstructive pulmonary disease, and farmer’s lung)
(20) Gastrointestinal, metabolic, and digestive disorders (including changes in liver enzymes, lipid abnormalities, and ulcers)
(21) Immune system disorders (immune suppression, allergy, and autoimmunity)
(22) Circulatory disorders (other than hypertension, ischemic heart disease, and stroke)
(23) Endometriosis
(24) Effects on thyroid homeostasis
(25) Hearing loss

Diseases and Conditions

(26) Eye problems

(27) Bone conditions

Sources: Department of Veterans Affairs, “Health Outcomes Not Associated with Exposure to Certain Herbicide Agents; Veterans and Agent Orange Update: 2008,” 75 Federal Register 81332-81335, ~~December 27, 2010~~, and Department of Veterans Affairs, “Determinations Concerning Illnesses Discussed in National Academy of Sciences Report: Veterans and Agent Orange: Update 2012,” 79 Federal Register 20308-20313, April 11, 2014.

- a. VA provides a presumption of service connection for amyotrophic lateral sclerosis (ALS) for any veteran who develops the disease at any time after separation from service and was on active, continuous service of 90 days or more (See Department of Veterans Affairs, “Presumption of Service Connection for Amyotrophic Lateral Sclerosis,” 74 Federal Register 57072-57074, November 4, 2009). It should be noted that ALS is not associated with Agent Orange exposure.
- b. VA provides a presumption of service connection for Parkinson’s disease.

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