

1957: Soviet Union launches the first artificial Earth satellite: Sputnik 1. Sputnik 2 follows in November, this time with a passenger—a dog named Laika.

1958: The National Aeronautics and Space Administration (NASA) is formed in the US.

1960: Norris and Prescott find that bottlenose dolphins use echolocation to locate objects in the water.

Soviet cosmonaut Yuri A. Gagarin makes one orbit of the Earth in Vostok 1, making him the first man in space. During his flight time of 108 minutes, he reaches an apogee of 327 km. He lands safely in Siberia.

1962: In a speech delivered at Rice University, President John F. Kennedy challenges NASA to place a man on the Moon within 10 years. The administration sees the moon mission as a chance to seize a public relations victory from the Soviets.

1967: Christian Barnard carries out the first heart transplant operation, transferring the heart of a 25-year-old woman into the body of Louis Washkansky, a 55-year-old grocer. Washkansky lives for 18 days.

1969: Apollo 11 is launched. After entering lunar orbit, astronauts Buzz Aldrin and Neil Armstrong transfer to the lunar module. Michael Collins remains in lunar orbit piloting the command and service module. The LM descends to the surface of the Moon on July 20, landing at the edge of Mare Tranquillitatis. Armstrong and Aldrin spend more than two hours walking on the lunar surface.

1970: The first Earth Day is celebrated in the US.

1975: The last remaining Apollo Command-Service module docks with the Soviet Soyuz 19 capsule, marking the first international spaceflight.

1976: The National Academy of Science reports that propellants from spray cans are causing damage to the ozone layer.

Scientists at MIT announce construction of a functional synthetic gene, complete with regulatory mechanisms.

The tanker Argo Merchant runs aground, spilling millions of gallons of oil off the coast of Massachusetts.

1977: Apple introduces the Apple II, the first pre-assembled personal computer.

1979: At the Three Mile Island nuclear power station near Harrisburg, Pennsylvania, a coolant accident releases radioactive gas into the atmosphere. Although radioactive fallout is minimal, the political fallout is devastating.

The first “test tube baby”, Mary Louise Brown, is born in England.

1980: The US Supreme Court rules that a microbe engineered by General Electric for oil clean up can be patented.

A NASA TR-1 survey aircraft operating over Argentina and Chile confirms the existence of a “hole” in the ozone layer over Antarctica.

1981: Crippen and Young become the first astronauts to use a reusable launch system with the launch of the space shuttle Columbia.

IBM introduces DOS and markets the personal computer system to the general public.

Chinese researchers duplicate a golden carp, the first animal to successfully be cloned.

1982: William DeVries transplants the first artificial heart, developed by Robert Jarvik. The recipient, Barney Clark, lives for more than three months after the surgery.

Eli Lilly & Co. releases the first commercial product of genetic engineering: human insulin produced by bacteria.

1984: A Union Carbide plant in Bhopal, India releases tons of methyl isocyanate into the air, killing thousands of Indians in the worst industrial disaster to date. Death toll estimates vary widely, but injuries number in the hundreds of thousands.

Allen Wilson and Russell Higuchi are the first to clone genes from an extinct species.

1986: “Brian”, the first widely-recognized computer virus is detected in the wild.

The Challenger shuttle is destroyed 73 seconds after launch due to a failure of an O-ring gasket on one of its boosters. Seven astronauts and Christa McAuliffe, who had been selected the preceding year as the first “teacher in space,” are killed in the disaster.

The Mir space station is launched. Described by the Soviets as the core of the first permanently manned space station, it features six docking ports and can be occupied by two cosmonauts.

Reactor #4 at the Chernobyl nuclear power plant explodes, spreading radioactive material over the Soviet Union and Scandinavia. More than 30 people die as a direct result of the accident, and more than 16,000 square kilometers are declared off-limits because of residual radiation and fallout.

1987: The Montreal Protocol, signed by 24 countries, bans the use of CFCs.

The world population passes the five billion mark.

1988: The US shuttle program is resumed on September 29, with the flight of Discovery and its crew of five astronauts.

More than 10,000 United Nations Peacekeeping troops stationed in Cambodia, Angola, and the Western Sahara are awarded the year's Nobel Peace Prize for their mediation of conflicts throughout the world.

The Human Genome Organization is founded by scientists to accelerate the mapping of human genetics.

The first patent for a vertebrate is issued to the Harvard Medical School for their genetically engineered mouse.

1989: Exxon Oil's Exxon Valdez runs aground in Prince William Sound and spills more than 260,000 barrels of crude oil into the ocean. The local ecology of Prince William Sound does not recover fully for more than 20 years and judgments against Exxon total more than \$5 billion.

1990: The long-delayed \$1.5 billion Hubble Space Telescope is deployed but because of an optical defect, it initially fails to provide the degree of resolution for which it was designed.

The Human Genome Project is launched.

1991: While fighting a rearguard action during the First Persian Gulf War, Iraqi soldiers set fire to hundreds of oil wells on the Arabian Peninsula.

1992: The membership of the United Nations grows to 172 nations.

UN member state Norway resumes whaling in the Arctic and North Atlantic oceans.

NASA begins the Search for Extraterrestrial Intelligence program (SETI).

The first genetic linkage map of the entire human genome is published.

1993: The Greenhouse Effect is reported as a statistical certainty when a team of meteorologists conclude an extensive global climatological survey.

1994: China resumes above-ground nuclear testing at its Lop Nor testing grounds in Xianjing province, releasing hundreds of tons of radioactive soil into the atmosphere.

The Genetic Privacy Act is the first legislative product of the Human Genome Project. It proposes the regulation of collection, analysis, storage, and use of DNA samples and the genetic information obtained from them. The genetic mapping five-year goal is achieved a year ahead of schedule.

1996: Water-ice is discovered by the Clementine spacecraft at the bottom of a 13-kilometer-deep crater at the Moon's south pole.

Dr. Ian Wilmut, an embryologist at the Roslin Institute in Edinburgh, Scotland, becomes the first scientist to successfully clone a mammal.

2011: The Tohoku earthquake and tsunami result in three reactor core meltdowns, three hydrogen explosions, and the release of nearly 800 petabecquerel's of ionizing radiation. Radioactive groundwater will continue to leak into the Pacific for over 100 years.

2012: Teams at the University of California Berkeley and MIT / Harvard independently demonstrate the capability of the CRISPR / Cas-9 system to vastly improve the efficiency of gene editing.

The Hubble eXtreme Deep Field image is released. This observation covers one thirty-two millionth of the sky and contains some 5,500 galaxies.

2018: Chinese researcher He Jiankui and his team announce that they have brought to term three human babies with a genetic alteration to make them resistant to HIV. Neither the larger scientific community nor the children's parents were aware of the alteration before the announcement. The manipulation perversely leaves the children more vulnerable to other illnesses.

2019: A novel coronavirus spreads in a global pandemic, ultimately infecting over two billion people and directly causing more than five million deaths as it circulates and mutates around the world over subsequent years.

2030 The disputed Kashmir region between India and Pakistan is rocked by waves of violence. Attacks by regular army and paramilitary forces from several sides brings the economy to a standstill. The broader regional conflict continues as a series of increasingly violent small-unit battles and frequent terror attacks in the interiors of each nation. The United Nations brokers a tense agreement between the major parties, mostly by acting to limit increasingly powerful corporations acting as quasi-governments in remoter areas.

In June, the Big One hits the Cascade subduction zone. Fires, landslides and a tsunami all follow. Much of the Seattle metro area is leveled.

The EU passes a sweeping revision of its marriage laws. The new legislation includes provisions for time-limited “contract” marriages as well as group marriages and other alternative family structures. The European Parliament votes to remove all references to gender and marital status on official documents.

2031: 47,000 people die when a toxic compound is released into the water supplies of Los Angeles, Tokyo, Lagos, and Delhi on Earth Day. Zero Nation, an organization protesting population growth, claims responsibility. Many survivors find themselves reproductively sterile, while others bear children suffering severe birth defects.

Sales of meat grown in laboratory bioreactors exceeds that of meat from animal-derived sources.

2032: The Europa Lander’s EMILI instrument detects the first evidence of life on another world in the form of large scale, self-assembling organic polymers found on the ocean floor of the Jovian satellite.

2033: The first long-term base is established on Mars. The station is dependent on regular resupplies, but manages to extract its own water and air from the Martian environment.

2034: Biogene equips their executives with implanted data transmitters. Each transmitter continuously records health information and relays it to a central system. The company says it will incorporate “healthy behavior” into pay and promotion decisions, and points to this as a revolution in the company’s ability to maximize employee health. The action is widely criticized by human rights organizations.

A concrete cap covering 3 million cubic feet of plutonium-laced waste from atomic weapons tests on the Rongelap atoll is dislodged by waves from Typhoon Jerwin. The waste, deposited after 43 separate atomic weapons tests in the 1950s, spreads throughout the chain of coral islands and renders much of it lifeless.

2035: A civil engineering firm led by experts from the United Islamic Republic completes the Miami Seawall and Water project. The hundreds of kilometers of dams allows most of the city to be pumped out, and uses electricity supplied by tidal generators to power the world’s largest desalinization operation.

The West Antarctic Thwaites glacier collapses suddenly, along with the smaller Pine Island glacier. Their combined half-million cubic kilometers of ice raises sea levels worldwide by 50cm.

2036: Biogene Corporation signs a treaty with the government of Colombia, giving it the legal authority to prosecute any party presenting a threat to the company or its employees. Biogene is awarded “special legal entity” status. Viewed with dismay by the international community, the treaty gives Biogene the power to appoint judges, legislate and enforce laws, and arm a paramilitary security force.

2037: The Republic of the Maldives becomes the first country to cease to exist due to climate change when the nation, only an average of 3 meters above sea level, is overwhelmed by storm waves.

Using multiple gene drive techniques to create “daughterless” animals, eight species of invasive predator are completely eliminated from New Zealand.

2038: Political unrest grips much of North Africa and deeply affects production of phosphate-bearing rock. Without raw materials for fertilizer production, crop growth across much of South America and Asia is limited. Food shortages are increasingly common and famine is one of the leading causes of death in more than 40 countries. The United Nations High Commissioner for Refugees is given the authority to requisition stockpiles of food in the United States, Canada and Ukraine.

Lavender Organics makes techniques for selecting simple traits like hair and eye color in human fetuses available to the general public. Initially prohibitively expensive, “designer baby” services are soon widespread.

2039: A group of young, ultra-rich socialites exploits the EU’s group marriage framework and the precedent of the Biogene Treaty to form a single giant family in order to help preserve their collective wealth. Ultimately consisting of several hundred members, the family incorporates as the Feinbaum-Blanc Investment Group. Ubiquitous public-private partnerships place the company in essentially complete control of Switzerland’s day to day operations and make it the de facto national government.

2040: Sweden eliminates the krona for nearly all consumer transactions. Samhällsskatt krediter are a virtual currency earned for “pro-society behavior and work” as well as for labor. These social credits can be converted to more traditional currencies for overseas transactions but make up the majority of the domestic economy. Critics point out that what constitutes “pro-society” is entirely up to government agencies, giving them unprecedented influence over individual choices.

The first neural interface is implanted in a human. Connections to the audio and visual cortexes allow the user to hear and see data linked from an external source.

2041: Biogene arrests, tries, convicts and executes a “corporate citizen” entirely within its own judicial system. The UN immediately threatens Colombia with economic sanctions and international censure. The national government briefly suspends the treaty with Biogene.

2042: Marco Gottfried’s team develops techniques to unlock cetacean intelligence and begins communicating with dolphins.

An artificial intelligence named BABA is included as a lead author in a technical report in the journal Science.

Feinbaum-Blanc Investment Group (FBIG) completes a network of spaceports around the world, providing regular daily service to orbit and resupply for the increasing construction needs of corporate space programs.

Lavender Organics licenses a package of medical and surgical techniques that makes gender alteration quick and easily obtainable.

2043: A team of physicists from Stanford University, Fermilab, and the Russian Academy of Sciences initiate, control, and sustain a fusion reaction at the National Ignition Facility for 57 days. The reaction is the first to produce considerably more power than it consumes.

Much of Micronesia and the Caribbean become functionally uninhabitable as increasing numbers of large typhoons and hurricanes sweep the respective regions.

Gibson Microelectronics develops a ceramic superconductor that has zero resistance at 257° Kelvin (−14°C). Forming only in zero-gravity, superconducting ceramics quickly become a keystone industry for orbital manufactories.

2045: Anasi Systems, a French genetics firm, develops a counter-virus intended to neutralize most solid-tumor cancers.

A late fall heat wave sweeps much of the US east coast. In October, a coronal mass ejection from the sun causes extensive damage to the electrical grid and power failures are widespread. Immediate deaths number in the thousands and include those killed in riots over water distribution in the mid-Atlantic region.

2046: Biogene patents “bioprinting” custom organs onto protein scaffolds. Using the recipient’s own peripheral stem cells eliminates the problem of organ rejection.

Gibson Microelectronics refines its superconductor to be effective at 268° Kelvin (−5°C).

2047: The third consecutive year of massive and sustained heat waves throughout the southwestern United States leads to a massive out-migration from cities like Phoenix, Arizona and Las Vegas, Nevada. Millions leave the region as roads become impassable due to buckling, overloaded water and power distribution systems fail, and food distribution becomes almost impossible.

2048: Under combined African Union and United Nations leadership, La Grande Muraille Verte is completed. The anti-desertification “Great Green Wall” stretches from Senegal to Djibouti and combines tens of billions of trees with improved water use and land protection and has a significant effect on food security for millions of Africans.

2049: FBIG subsidiary SilverStar Manufacturing perfects an economical method for manufacturing fusion reactors. With soaring corporate valuation, SSM increases production of fusion drives to one every nine days. Over the next year, interplanetary and orbital traffic increases ten-fold.

The western Pacific anchovy wild populations crash below sustainable levels, largely due to rising water temperatures. Hundreds of predator species collapse, along with fishing industries throughout the Pacific rim.

2050: The United Nations contracts with SSM to produce a fleet of heavy-lift fusion craft to begin construction of a self-sufficient mining and research colony on the surface of the Moon. Imbrium City is intended to house more than 10,000 permanent residents when finished.

After decades of warnings, the North Atlantic thermohaline circulation collapses. Flows of the Gulf Stream and North Atlantic Gyre currents are disrupted. Temperatures drop throughout northwestern Europe. Snow persists in southwestern Ireland into April, and frosts impacts German agriculture into May.

2051: Atlas Aerospace finishes construction of its Icarus Station orbital facility. Along with other habitats, the permanent population of low Earth orbit numbers in the thousands, most of whom are engaged in specialty manufacturing. Tourism is the second largest source of income.

With expansion of autonomous mining and refining facilities, the existing stations on Mars become largely self-sustaining. The settlement leadership claims all Mars in the name of the United Nations, but the claim is largely ignored.

2052: Networked artificial intelligences and robotics platforms revolutionize the care of the sick and elderly. Household robots provide personal care, mobility assistance, dispense food and medicine, monitor health information and provide companionship for an increasing portion of the population.

2053: The initial Imbrium City tunnel and habitat complex is completed. The United Nations attempts consolidation of various national space programs in order to compete with the dominant private space industry.

The Manhattan Flood Control Project is completed, including hundreds of kilometers of seawalls and an extensive pumping system throughout the borough.

2054: An attempt to sequester atmospheric carbon in plankton goes awry when iron particles spread from a research ship in the Baltic Sea instead lead to a massive algal bloom. The anoxic zone created by the algae kills millions of cod and other commercial species.

Net migration out of a cooling Europe exceeds five million people per year.

2055: A winter of record precipitation is followed by a weeks-long heatwave affecting most of eastern Australia. The combination of excessive fresh water load and prolonged heat leads to the largest bleaching ever on the Great Barrier Reef. Eighty percent of the 3,000 component reefs are virtually exterminated.

The press sensationalizes the Mobile Bay incident, in which an orca named Golden is charged with manslaughter for killing a human harasser named Hulston. Golden is confined for life at a government research facility.

2057: Dr. Josef Ben-Gurion's team begins construction of a mutispectral telescope network occupying Earth's L3 position. When coupled with existing instruments, the telescope will have the resolving power equivalent to a mirror half the size of Earth's orbit around the sun.

2059: DNA-based optical data storage becomes commonplace. A cubic centimeter of commercial grade storage gel can hold more than 100 terabytes of information.

Earth's population reaches nine billion.

2060: A climate change-fueled collapse of the global reinsurance industry triggers an implosion of banking systems worldwide. In Switzerland, FBIG largely replaces most governmental social functions, extending its corporate control of Estonia to the Alpine nation. In Colombia, Biogene continues to expand its control over a protected corporate enclave, carving tens of thousands of square kilometers out of national control.

2061: Working in secret in a lab housed in a Biogene storage building, Teres Lopez de Silva creates the first of the beings that will later bear their name. These creatures are the first fully human-animal hybrids, rather than humans with single animal gene insertions.

Several European nations recognize cetaceans as full citizens.

2064: In response to financial instability, business continues to shift away from national currencies and towards individual corporate "scrip".

2067: A pilot whale named Scribe sues several nations around the Pacific in UN court for having "contributed to the cetacean genocide." Proceedings drag on for more than a decade and no conclusive ruling is ever made.

2070: Atlas Materials establishes a mining base in the asteroid belt. Despite enormous construction costs, it becomes profitable within the year.

The Old River Control Structure on the lower Mississippi River collapses during a hurricane. Over a span of months, the river shifts course 130 kilometers to the west. River flow past the Port of New Orleans is insufficient to support barge and ship traffic, blocking the export of fifty

million tons of grain. Food shortages develop in Central and South America and parts of eastern Asia.

2071: After a decade long series of precedent setting civil rights cases around the world, the UN officially recognizes the separate and sovereign Cetacean Cultural State and awards it full voting membership.

2072: A skyhook is completed atop Pavonis Mons on Mars. The structure reaches 17,000 km to Ares One, an orbital facility in areostationary orbit.

2073: The United States and much of Western Europe face armed insurrections, partially in response to record-breaking immigration driven by climate change in Asia and Central and South America.

Millions of Chesapeake menhaden wash up on shore. Most of the dead fish are bloated with shocking quantities of ingested plastic. Tens of thousands of jobs are lost in the tourism and hospitality industries across three US states. The United Nations provides economic and food aid to areas of the American east coast.

2075: An exploration team launched from the UN station in Earth orbit lands on Ceres in the asteroid belt. The expedition's main outpost, Delphi Station, is a permanent structure, gathering and refining most of its required resources from the asteroid itself.

Astronomers Janet Masters and Yuri Vishenko record anomalous trajectories of comets from the Kuiper Belt. Later in the year, they publish evidence of a massive object beyond the orbit of Pluto. Amateur speculations about the object range from UFOs to black holes.

2076: Physicist Josef Ben-Gurion proposes that Masters and Vishenko may have discovered a Lorentzian wormhole.

Contamination from the South Asian war devastates much of the Indonesian and Philippine rainforests. Agricultural areas concentrated in eastern China are mostly spared, in stark contrast to near-collapse in northeastern and coastal India.

2077: Prometheus II, a fusion-powered probe designed at the Jet Propulsion Laboratory, is launched by the UNSA to investigate the Masters-Vishenko anomaly.

Food shortages and famine sweep much of Europe and Asia.

2078: Prometheus II enters the wormhole. Five days later, contact is reestablished with the probe on its return to the solar system. Measured positions of several known pulsars indicate the probe exited the wormhole in the Lambda Serpentis System, 38.9 light-years from Earth.

The United Nations organizes a herculean effort to remediate contamination from the South Asian War, ultimately conscripting two million workers.

2079: After nearly a decade of construction, the first Earth Skyhook is completed. The structure links Clarke Station in geostationary orbit to Puerto Horizonte, an international city outside Quito, Ecuador.

Rising brackish water continues to contaminate much of the supply for Lagos, Nigeria. For six days in summer, the city is without any municipal water service.

2080: The UN launches the Argos series of missions to Lambda Serpentis II. The Argos astronauts discover an Earth-like waterworld with a complex biosphere inexplicably based on DNA.

The UNSA begins construction of a massive colony ship, the UNSS Cousteau. The effort, called the Athena Project, is intended to colonize Lambda Serpentis II and is expected to cost trillions. Economists argue that either the world will be rendered destitute by such an exodus of resources, or that spin-off technologies will drive the global economy to new heights.

GenDiver is contracted to provide limited modification of colonists. Modifications include webbing between fingers and toes, significantly more efficient hemoglobin for carrying oxygen in the blood, and skin more resistant to saltwater. Essentially nonexistent the year before, a later investigation shows that the company was created largely to compete for UNSA contracts.

2082: The Silva hybrids sue Biogene in UN court for illegal imprisonment and deprivation of rights – essentially for keeping them as slaves. Biogene turns over the project to the UN, and the hybrids and the associated research program are removed to a land grant on the Canadian prairie.

Human activity in the asteroid belt continues to increase. Mining remains the main industry, but a vigorous service sector develops in support. A discrete and anonymous banking system develops simultaneously, ultimately becoming a major part of the belt economy.

2083: Overpumping and a decade of drought contribute to the exhaustion of the San Joaquin Valley groundwater basin. Four million acres of the most productive agricultural land in North America is rendered mostly useless. Armed fighting between farmers and government agents break out at pumping stations and along the Delta-Mendota canal.

2085: Work is completed on the Cousteau, and it is stocked with equipment and supplies intended to support the Athena project for an initial period of 5 years. Five thousand colonists - including 500 cetaceans - are selected from a pool of more than 50 million applicants to participate in the colonization effort.

A digital attack on the control systems for the Caspian Sea irrigation megaproject leaves the majority of the system in ruins. Intended to supply water for agriculture throughout Kazakhstan and the central Asian states, the network of dams and canals is largely abandoned. Progressive desertification across the region intensifies.

2086: The UNSS Cousteau mission leaves Earth orbit and after becoming the first humans to leave the solar system, ultimately traverses the Masters-Vishenko wormhole. On December 12, Cousteau enters orbit around Lambda Serpentis II, and the crew immediately begins detailed surveying operations.

2087: On January 3, Cousteau begins a landing effort on the surface of Lambda Serpentis II. The Colonial Headquarters, a modular structure ferried to the surface via shuttle, is established on the site of what will eventually become the city of Haven.

In the economic depression following the first phase of the Athena Project, all of the largest ten transnational Incorporate states and dozens of smaller ones sign the Icarus Accords aboard Icarus Station. The agreement's particularly restrictive language "requires their mutual assistance" against any "perceived threats" from the UN.

2088: The Athena Project colonists finish construction of colonist housing in Haven, the first settlement on Poseidon. The first native Poseidoner, Jessica DeMarco, is born two months later. Almost immediately, expansionist factions among the colonists argue for starting additional settlements around the Pacifica Archipelago.

Haven aquacultural technicians begin farming the shallows around the island for several species of native algae.

Over ten percent of people on Earth live in intentional communes, group families, or other non-traditional family structures involving more than two adults.

2090: The Mekong Rice Blight devastates crops in many parts of Southeast Asia. Hundreds of thousands of people in Asia starve as rice crops fail throughout the continent.

Earth's population stands just under 10.5 billion, while Luna's permanent residents number 11 million.

The last of the wild common dolphin populations are uplifted by their sapient cousins in the Cetacean Cultural State.

2091: The MRB virus is identified as an engineered organism and traced to an unregulated field test of a counter-pathogen developed by Fischer Foods. Mutated strains of the Fischer virus are discovered in sampled crops in North and South America. The new variants are decidedly more virulent than the original. These new forms attack not only rice, but many other species of grains

and grasses as well. The United Nations' already massive hunger relief efforts in southern and central Asia are strained to the breaking point.

Breakaway groups of expansionist colonists found several more settlements on Poseidon, including Atlantis and Second Try.

Ibrium City's mass driver begins operations, sending more than 10,000 metric tons of refined metal to Earth orbit in its first year of operation.

2092: Starvation is widespread throughout most of the Earth due to the Fischer Virus, and the catastrophic famine becomes known as the Blight. Despite massive government subsidies, corporations focus largely on making individual patented crop strains immune to the virus rather than trying to eliminate the pathogen entirely. In light of the enormous death toll, Zero Nation publishes a video announcing its work "completed by the wrath of Nature."

Strict import controls are instituted widely off Earth to prevent spread of infected plants, and orbital smuggling becomes a major criminal activity.

A settlement on Poseidon is destroyed in a cyclonic storm many times more powerful than any terrestrial hurricane. More than 200 colonists lose their lives.

Work begins on converting asteroid 1172 Aneas into a permanent habitat with rotational gravity. At 140 kilometers in diameter, the asteroid is the largest in Jupiter's "trailing Trojan" group.

2093: United Nations estimates place the global death toll as a direct result of the Blight at one person in 10.

An executive order from the UN Secretary General creates the Global Ecology Organization. The UNGEO is chartered to monitor and enforce compliance of the UN member states and corporations with the emergency regulations enacted in response to the Blight.

The stations on Luna and in the asteroid belt, hydroponically self-sufficient, remain free of the Fischer Virus and are unaffected by the Blight. The government of Luna establishes a full embargo on all traffic from Earth, though shortages of specialty materials are pervasive. Mars colonies survive with emergency supplies being launched from the mass driver on Luna.

The Athena Project resupply vessel planned to support the colony on Poseidon is wrecked in an attempted takeover by a group hoping to flee Earth. The vessel is a total loss and is subsequently scrapped. Faced with the economic fallout of the Blight, the UN is forced to abandon any further attempts to resupply the Athena Project.

Quentin McDerritt and a group of his New Gaian colonists establish a settlement in Poseidon's Zion Islands.

2094: A powerful extratropical cyclone destroys the Thames tidal barrier. Central London is inundated.

Blaming “continued unrest and government failures”, Biogene petitions the UN to recognize the sovereignty of its city-state at El Dorado. Biogene claims that, unlike the Colombian government, it has the resources to restore order to the region and alleviate the suffering of its citizens. The measure is supported by the Icarus signatory Incorporates and the government of Columbia. After heated debate, the UN General Assembly pushes through a resolution granting “formal sovereignty to any Incorporated city-state capable of satisfying the obligations of government in regions where traditional national governments have failed to do so.” With this resolution, El Dorado becomes the first of the Incorporate city-states and is recognized as an independent power.

2095: The UNGEO is given the authority to enforce its emergency mandates on member national and Incorporate states that violate regulations pertaining to the Blight effort through UN peacekeeping forces. The UNGEO quickly becomes a powerful world policing organization.

Cousteau's main and backup computers crash irrecoverably. Left without guidance or environmental controls, the vessel is completely stripped of all usable resources, sealed, and left in orbit. The last of her three reactors is taken to the surface to join the others in providing the colony with power.

2096: The resupply ship from Earth fails to arrive and concern in the colony runs high as predictions of doom prevail. Breakaway settlements argue for increased independence from the project leadership in Haven.

Terrorists detonate explosive charges along a section of the UN Skyhook, about 10 km above the surface of the Earth. The massive cable is almost completely severed and will remain inoperable for most of the next 40 years.

2098: The UNGEO launches a strike against a food-processing plant in Russia. The plant, maintained by the minor Incorporate State Vostonaya, is reported to have been illegally hoarding food reserves and supplying corporate enclaves with disproportionate allowances. The strike is conducted by augmented shock troopers.

2100: The World Health Organization announces that continued mutation of the Fischer Virus will “significantly delay” containment of the Blight.

In a desperate and unanimous vote, the Security Council of the United Nations elects to subordinate all organizations and functions of the United Nations to the Global Ecology Organization, giving the GEO the necessary power to protect and salvage the planet's threatened ecology. The General Assembly eventually approves this radical restructuring. Several nations, including the United States and China refuse affiliation with the newly created world government.

2101: Claiming that the Fischer Virus was developed at a biological warfare facility in Jaipur, China again launches a series of attacks into South Asia. With rivals' attentions turned elsewhere, Middle Eastern powers strike eastward into the Hindu Kush. The war expands when the fledgling GEO responds by leading a multinational coalition of its member states in deploying troops to southern Asia and the Gulf of Oman. Naval assets are also dispatched to the Bay of Bengal and the Sea of Japan.

Conflict continues at some level in the region for more than fifteen years, as the Blight prevents all participants from committing sufficient resources to end the hostilities. The Second South Asian War ends with the UIR controlling much of Afghanistan, and India controlling the former Pakistan and Bangladesh.

2103: While on a sub-orbital flight from Haven to New Corazon, Cousteau's lander Calypso observes a school of animals swimming just below the surface of the ocean at more than 40 knots. The school extends over more than 50 square kilometers. When a skimmer from New Corazon arrives to investigate, no trace of the animals can be found.

The rotation of Aneas is spun up using fusion drives. Spinning once every two hours, the interior tunnels experience over half a G of acceleration. Work begins on construction of medical and child-rearing facilities.

2104: Citing ongoing noncompliance with food distribution schemes, GEO shock troops overthrow the government of Tanzania in a massive coordinated assault. A new, more cooperative executive is installed within days, but disruption is widespread. Despite this, the GEO continues to enjoy widespread popular support for its successes in combating the Blight.

Medical supplies on Poseidon run short in the wake of a major fire that destroys most of Harmony, an independent settlement approximately 3,000 kilometers west of Haven.

Ray-like beings first encountered in 2093 are observed again. This time, observations extend over several days and show the creatures herding large schools of fish.

2105: With no resupply from Earth, the group of scientists and administrators in Haven who have been functioning as the settlement's de facto leadership announce their joint resignation from the role and call for popular elections. Exploration is curtailed as efforts are largely redirected towards survival. More towns around the planet claim independence, while anti-growth rhetoric becomes increasingly militant.

2106: The first families move into the habitats on Aneas. The asteroid's centrifugal gravity is necessary for normal growth and development of children, most of whom are raised in group-care creches.

2107: The GEO-supported Tanzanian leadership collapses amidst a crisis of confidence. Much of central Africa is engulfed in civil war and anarchy as economies and then governments fail in the wake of uncontrolled famine and disease.

The 20th anniversary of Planetfall is met with mixed reactions by the colonists. The colony itself sets a new record for births, but the sense of abandonment weighs heavily on its inhabitants.

2108: Ezra Vlotsky deploys the Gottfried genelifting techniques among the Beluga population of Hudson Bay.

2109: Journalists publish a series of reports claiming that the 2104 GEO-led overthrow of the Tanzanian government was based largely on pretext and subsequently riddled with graft and corruption. In the wake of the scandal, major GEO reorganizations lead to the creation of the Marshals Service.

2110: A native Poseidoner, a teenager out fishing alone near New Corazon, describes having a short, intelligent encounter with an alien ray. His report is largely discounted.

GEO assertions that the Blight had been contained are proven false when much of central Canada's grain crops are devastated by a new variant of the Fischer Virus. GEO troubleshooters resort to scorched-earth tactics in an attempt to stop the spread of the new strain.

2111: An expedition exploring reefs south of Atlantis records a ray carrying an unidentified metallic object. Debates rage around intelligence in the creatures.

A group calling itself the New Zero Nation detonates a bomb in an industrial area neighboring Haven harbor, killing nineteen people.

2112: A research vessel off Atlantis is destroyed a day after capturing a ray for scientific study. There are no survivors, and the cause of the boat's destruction is never discovered.

Rationing of powered transportation begins on Poseidon as vehicles begin to deteriorate and reserves of spare parts are depleted.

2113: The Third African War, begun with the GEO attack in Tanzania, is brought to an end with the Charter of the African Confederation. The new nation, an association of former countries, ethnic and cultural groups and political parties, covers tens of millions of square kilometers and millions of citizens.

2115: The last colonial shuttle, Alcyon, is destroyed while attempting to land in heavy weather off Second Try. Its crew of five and all 23 passengers are killed.

Travel to and from Poseidon orbit becomes impossible. The power struggle between colonial factions shifts heavily toward expansionist groups who advocate that population dispersal will improve the colony's chances for survival.

2116: GEO officials announce that the Blight has been effectively eradicated. Efforts turn from containment to rebuilding.

The first marriage license between a human and a cetacean is granted when a Bottlenose named Walker marries Delyse Parker-Fanning in a ceremony in the West Indies.

2117: The city of Isfahan is destroyed by a 10-kiloton nuclear missile launched from the Anasi city-state at Beirut. Casualty estimates exceed a half a million dead and wounded within the first week, and over 30 square kilometers of the city are leveled. The outcry is universal. Anasi city-state leaders claim the attack was the work of rogue elements, and turn over fourteen corporate citizens for prosecution without protest. The Incorporate is placed under a GEO military governorship until "new leadership and security protocols can be established." The governorship continues for the next 10 years.

2118: The orbit of UNSS Cousteau completely decays, sending the vessel plunging into Poseidon's atmosphere. Thousands of colonists watch the flaming Cousteau arc across the sky. A great deal of the wreckage, including Cousteau's computer core, is never recovered.

2119: Two years after the conclusion of the Southeast Asian war, conflict again rages on the Korean and mainland Southeast Asian peninsulas. Threats of the use of tactical nuclear weapons provokes widespread outcry against the belligerents. The GEO negotiates for a cooling-off period without success. A strike against the leadership of both parties leaves no one to authorize an attack, and both sides agree to a return to pre-conflict lines. The strike is attributed to the GEO special forces, but no credit is ever claimed.

A robotic probe is launched through the wormhole to Poseidon. The probe is intended to relay a message to colonists explaining the circumstances leading to their abandonment. A minor system failure leaves the probe's transmission antennae aimed into deep space and its message is never received by the abandoned colonists.

2120: After 30 years, the Fischer virus is no longer a threat to human agriculture. The death toll attributed to the Blight exceeds 50%. Earth's population is now 4.8 billion.

The population of the colony on Poseidon reaches 16,000.

2121: Remains of one of the ray-like creatures are discovered floating in the Harmony harbor. Examination of the carcass is limited due to deteriorated laboratory capacities. Reports from the outlying settlements of colonists interacting intelligently with the rays, now popularly called "Nereids," are still generally discounted.

Biologists discover a sensory organ embedded in the skin of the Nereids that appears to be a chemical sensor of great precision. Protein-rich secretions from glands in the Nereid's skin are believed to be related.

2124: Mt. Odysseus, the central peak of the island on which Atlantis is built, erupts. More than a million tons of rock and soil are blasted into the atmosphere in a series of explosions. Many of the 400 colonists on the island are buried under the ash and ejecta from the mountain.

2126: The first of the Aneas creche babies reaches adulthood. Several Incorporates advertise genetic redesign "spacer" packages. The cost of these packages places them out of reach of many parents, but the creches continue to see widespread use.

2128: For the first time in over 25 years the human population of Earth shows positive growth.

The Poseidon colony's population reaches 20,000.

2133: The GEO publishes a draft plan to institute planetwide population controls in order to avoid post-Blight drains on resources. The move is decried by many as an attempt to "return agrarian peoples to subjugation."

2135: Planetwide storms and an exceptionally wet rainy season that dumps three meters of rain over many of the settled areas of Poseidon lead to widespread fungal infections among the colonists.

A coordinated effort by GEO, Incorporate, and independent personnel returns the Earth Skyhook to operational status. The GEO develops plans to expand much of Earth's economic redevelopment into orbital industry.

2137: Talks begin on Poseidon about the possible re-institution of a planetwide government. Independent group families and separatist factions walk out of the talks and the idea is abandoned.

Orbital passenger and cargo services expand rapidly on Earth. The Lunar and Martian embargoes are relaxed. Trade in specialty materials is tightly regulated though smuggling is common.

2139: A conglomerate of Incorporate and national states begins work on the Cooperative Orbital Access Project skyhook.

2140: Colonial farmers report that their aquatic crops are being eaten by fish herded by the Nereids. An attempt to fend off the Nereids erupts into violence when one farmer kills three of the creatures.

2144: Population estimates on Poseidon become less reliable as more groups cut off relations with the central project leadership in Haven.

2146: A helium flash in the last operational fusion plant on Poseidon destroys the reactor and much of the surrounding Haven countryside. The town is plunged into darkness as its primary source of electricity burns to the ground. Many colonists are lost in the accident and fighting the subsequent fires, which destroy much of the colony's limited infrastructure.

2149: The COAP skyhook becomes operational. Specific information about its performance is proprietary, but economic information confirms that its lift capacity greatly exceeds that of the UN Skyhook.

The GEO is embroiled in a gargantuan bribery scandal to divert tax revenues from the manufacture and sale of recreational drugs. Officials from several branches of government including internal auditors and a Deputy Chief Minister are involved. Much of the money lost is never recovered.

2150: A family farm south of Second Try claims to have "domesticated" a species of large, vegetarian fish. The fish are dependent on the farmers for much of their sustenance, and are the product of a selective breeding program. The farmed strain is both larger and slower than the root stock.

2155: The World Space Agency proposes a plan to send a recontact mission to the Lambda Serpentis colony. The plan, generally considered a long shot and prohibitively expensive, is met with a tepid response. Most in the GEO assume that the colony has been entirely lost.

A family of asteroid miners in the belt rockets to the top of the list of the system's richest after recording an enormous palladium stake. Despite their newfound wealth, most continue as prospectors.

2156: Despite aggressive lobbying by GEO officials against the move, the United Nations General Assembly is reinstated. The two-thirds vote of the member nations needed to disband the GEO falls short.

2157: The GEO announces that the last of the Fischer Virus has been exterminated after small samples originally intended for deep freezing in vaults around the world are mysteriously destroyed in a series of freak accidents.

2159: Ernest Carslake, an independent industrial tycoon, dies at 119. Carslake's will leaves his stupendous fortune to the WSA's recontact project. Widely regarded as an eccentric, Carslake's last years were spent trying to drum up popular support for the continued exploration of deep space.

The population of Poseidon passes 40,000.

2162: Dundalk Shipbuilding is awarded a contract for a mid-size space vessel capable of “extended, independent, extra solar operations.”

A sustained heatwave in northeastern Russia and Finland triggers a series of peat bog fires that rage throughout the summer. Smoke clouds dim the sun throughout the northern hemisphere.

2164: The Dundalk vessel is completed. The GEO announces that the UNSS Adm. Robert Perry will be crewed and provisioned for a three-year recontact mission to the Athena Project colony in the Serpentis System.

2165: Perry arrives in orbit around Poseidon. The orbital survey of the planet takes just under two weeks. Perry’s presence is detected by many colonists who have never given up watching the night skies for a signal from Earth.

2166: Perry’s lander begins shuttling down both crew and small amounts of cargo to the planet’s surface. The recontact with Earth is met with decidedly mixed emotions, particularly when the crew informs the colonists of the Blight and its aftermath.

The United States begins withdrawing its reluctant political support for the GEO. Acknowledging the GEO’s success in dealing with the Fischer Blight, the President expresses the country’s gratitude, while insisting that “America must once again become a free and sovereign nation.”

Several public and corporate organizations begin to push for restarting the regular resupply ships and scientific expeditions originally planned as part of the Athena Project.

2170: Incorporate states including Atlas Materials and Dundalk, are given contracts for large, high-efficiency supply ships to make regular runs to Poseidon.

The largest spaceship construction yard in the system is completed at Ceres.

2172: UNSS Ballard arrives in the Lambda Serpentis System, bearing more than 500 scientists and technicians in cold-sleep, and more than a half-million metric tons of supplies. The supplies are well-received by the colonists; the personnel, less so.

2174: Ballard arrives for a second time at Poseidon, this time bearing prefabricated components for an orbiting station. The facility is designed to expedite ground-to-orbit transport.

A floating scientific station less than 50 kilometers from Harmony is attacked by a herd of large, carnivorous animals. Although New Corazon is well within radio range of the station, no distress call is made, and logs show nothing out of the ordinary. All aboard the station are lost.

2176: The first GEO administrators arrive on Ballard's sister ship, UNSS Ejeta. Ejeta also brings the first independent commercial interests to Poseidon. Research teams from Lavender Organics, GenDiver, and Atlas Materials set out across the planet.

2181: Atlas Materials finishes construction of a research lab 150 meters below the surface of the ocean to facilitate the exploration of the seabed. More than 250 people live in the facility, which is given the indifferent name of Undersea Habitat 1.

2185: An Atlas mineral survey discovers deposits of a previously unclassified form of silicate in the crustal plates of the ocean floor. It is discovered that these "xenosilicates" can be used to specifically manipulate biochemistry more accurately and efficiently than has been possible before. The potential benefits are enormous, and Atlas attempts to keep its discovery secret. The information about the minerals is leaked by a disgruntled lab tech to an Earth-based media conglomerate for a 100,000cs payoff.

2187: An independent biochemistry lab on Earth uses a xenosilicate "template" to conduct genetic manipulation of unparalleled precision. The new technique stops degradation of genetic expression and breakdown in cellular machinery, essentially arresting the aging process. A massive exploitative rush for the mineral, now popularly referred to as Longevity Matrix Ore or Long John, begins. Poseidon promises untold wealth and immortality to anyone who can harvest a share.

2188: GEO contracts for three more interstellar transport ships are awarded, and Incorporate states and independent companies spend billions of dollars researching Long John harvesting technologies.

2190: The first wave of Incorporate immigrants arrives on Poseidon. The limited facilities for receiving, housing and feeding them are strained to the limits.

The first floating city on Poseidon, Dyfed, is built by Lavender Organics.

2192: Commercial flights from Earth bring a total of 30,000 people to Poseidon this year. Most native Poseidoners vehemently oppose the massive influx of Incorporate interests and personnel from Earth, but are powerless to stop the "newcomers."

Atlas Materials' sea floor facility is destroyed in an attack by rival GenDiver. A minor Incorporate war breaks out, and both companies begin importing paramilitary security personnel.

A resolution is introduced in the General Assembly which would repeal the UN treaty recognizing Incorporate state sovereignty. The bill is narrowly defeated, as more members become outspoken advocates for returning the GEO's power to the reinstated UN. Advocates begin calling for the passage of a single resolution which would abolish both the Incorporate states and the GEO.

2194: In response to the continued conflict between GenDiver and Atlas, the GEO appoints a garrison of 12 GEO Marshals, a company of Shock Troops, and a cadre of Magistrates to police the colony. Fort Pacifica is constructed as a central stronghold and base of operations.

Along with many smaller enclaves, the large settlement of Harmony announces its refusal to recognize the authority of the GEO and declares itself an independent state. Rather than worsen ongoing guerilla conflicts, the GEO elects to negotiate a political settlement with colonial representatives.

2195: Prosperity Station is constructed in polar orbit around Poseidon. The station serves as the home for GEO personnel on the planet, as well as a major staging point for cargo and colonists flowing both to and from the waterworld.

2197: The price of longevity treatment drops to about 75,000cs per year, so remains well out of reach of most of the Earth's population.

2199: Incorporate competition and exploitation on Poseidon continues to increase as the planet's population explodes towards two million.

Acting on pictures taken by a weather satellite, a survey team sponsored by National Geographic explores the Dunedin Seamounts. The team finds what appear to be ancient, artificial formations atop the submerged mountains.

A group of young natives in the Sierra Nueva Cluster assaults a GenDiver transport, leaving it in flames and its crew dead. This incident—and GenDiver's retaliation—marks the start of the Sierra Nueva War.

Colonial Administrator John Bishop is left in critical condition after a eco-terrorist bombing at the Government Center in Haven.

Responding to continuing violence in the Sierra Nueva and rumors of violence between natives and Hanover Security Service personnel in Westcape, the GEO begins shipping thousands of new military personnel to forward bases across Poseidon.