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CLIMATE CHANGE™

LAW & POLICY REPORTER

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FEATURE ARTICLE

U.S. SUPREME COURT'S NEW DISCHARGE TO GROUNDWATER DECISION IN *COUNTY OF MAUI* RAISES MORE QUESTIONS THAN IT ANSWERS

By Brenda Bass

Water quality issues grow more crucial as climate change makes freshwater sources much less plentiful in warming sections of the U.S. The climate change practitioner should stay knowledgeable about the federal Clean Water Act, and in that vein, we report on the Supreme Court's recent decision in *Maui*.

On April 23, 2020, the United States Supreme Court issued a 6-3 decision in *County of Maui, Hawaii v. Hawaii Wildlife Fund*, 590 U.S. ___ (Apr. 23, 2020) setting forth a new test for determining when a point source discharge to groundwater, that ultimately reaches a navigable surface water, is subject to the federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) permitting requirement. The U.S. Supreme Court held that an NPDES permit is required "if the addition of the pollutants through groundwater is the *functional equivalent* of a direct discharge from the point source into navigable waters." The Supreme Court lists several factors that may be used in determining whether a discharge through groundwater represents the "functional equivalent," but notes that the list is not exhaustive. Additionally, the Supreme Court did not apply this new rule to the facts in *County of Maui*, leaving the practical application of this rule unanswered.

In the majority opinion, delivered by Justice Breyer, the Supreme Court states that this rule narrows the "fairly traceable" rule articulated by the Ninth Circuit Court of Appeals in 2018, but yet is not so narrow as the interpretation advanced by the County of Maui (Maui) and the U.S. Environmental Protection Agency (EPA). Notably, the Ninth Circuit's "fairly traceable" test also included the phrase "functional equivalent of a discharge into navigable waters." However, no bright line distinction was made to differentiate between the "functional equivalent" test and the "fairly traceable" test. Thus, the *County of Maui* decision raises as many questions as it tried to answer.

Background

County of Maui arose out of a dispute over whether Maui needed an NPDES permit for discharges from its Lahaina Wastewater Reclamation Facility (Facility). The Facility treats domestic wastewater generated in West Maui, serving a population of approximately 40,000 people, and disposes of this treated wastewater effluent into groundwater through four wells. The Clean Water Act's permitting requirement applies only to discharges of pollutants from point sources to navigable waters, *i.e.*, "waters of the United States" (WOTUS). Because the Facility discharges to groundwater, which is not a navigable water, Maui had state-level and EPA Underground Injection Control (UIC) well permits. However, Maui had not sought an NPDES permit for these discharges.

Hawaii Wildlife Fund and several other environmental interest groups alleged that pollutants contained in the Facility's effluent reach the Pacific Ocean—a navigable water—and due to this hydrologic connection between groundwater and the Ocean, an NPDES permit is required. A tracer dye study indicated that the discharges from the injection wells appeared offshore, southwest from the Facility. *No one disputed* that the injection wells at issue constituted "point sources" under the Clean Water Act or that the Pacific Ocean is a navigable water regulated under the Clean Water Act. The main question was whether the discharge's indirect passage through groundwater obviated the need for an NPDES permit.

The 'Functional Equivalent' Test

The question before the Supreme Court was whether "pollution that reaches navigable waters only through groundwater [is] pollution that is 'from' a point source" requiring an NPDES permit. This case did not consider whether groundwater should be considered WOTUS. Instead, the Supreme Court viewed groundwater merely as a conduit through which a discharge from a point source is conveyed to jurisdictional waters. The court's concluded as follows:

> We conclude that the statutory provisions at issue require a permit if the addition of the pollutants through groundwater is the functional equivalent of a direct discharge from the point source into navigable waters

The majority articulated a standard that an NPDES permit is required "when there is a direct discharge from a point source into a navigable water or when there is the *functional equivalent of a direct discharge*" from a point source. Recognizing that the term "functional equivalent" is not defined, the Supreme Court further restated that a discharge requires a permit "when a point source directly deposits pollutants into navigable waters, or when the discharge reaches the same result through roughly similar means."

To further assist with determining what might be "roughly similar" to a direct discharge, the majority opinion also provided several potentially relevant factors. These factors include: 1) the pollutant's travel time between the discharge point and the navigable water; 2) the distance traveled; 3) the material through which the discharge travels; 4) dilution or chemical changes during travel; 5) the amount of pollutant entering the navigable water as compared to the amount that leaves the point source; 6) the way or location the pollutant enters the navigable water; 7) and the degree to which the pollution has retained its identity upon reaching the navigable water. The majority opinion makes clear that the list is not all-inclusive, but notes that time and distance may be the most important factors.

The Supreme Court also clarified that its new rule is not the same as proximate cause, and rejected importation of this tort concept into the Clean Water Act. The Supreme Court also rejected reliance on tracing alone to establish Clean Water Act liability or permitting requirements. However, the concept of tracing likely cannot be wholly ignored when applying the "functional equivalent" rule, particularly given the factors articulated by the Supreme Court.

The Supreme Court did note its concern with developing a rule that created perceived loopholes in the Clean Water Act, as well as its concern about expanding federal regulation to groundwater generally. The Supreme Court specifically recognized that the Clean Water Act leaves groundwater quality regulation to the states, and did not intend to upset this authority. And while the Supreme Court sought to avoid a rule that would apply the Clean Water Act to a discharge that reaches navigable waters only after traveling for many miles or many years, the Supreme Court wanted to avoid a rule where a discharger could avoid NPDES permitting requirements simply by moving a discharge pipe a few feet away from a navigable water.

The Ninth Circuit's 'Fairly Traceable' Test

In the underlying Circuit Court of Appeals decision, the Ninth Circuit determined that Maui was liable under the Clean Water Act based on the satisfaction of three elements:

> (1) [Maui] discharged pollutants from a point source, (2) the pollutants are fairly traceable from the point source to a navigable water such that the discharge is the functional equivalent of a discharge into the navigable water, and (3) the pollutant levels reaching navigable water are more than *de minimis*.

The Ninth Circuit rejected the lower court's determination that when pollutants reach navigable waters, regardless of how, the discharger is subject to Clean Water Act liability. The Ninth Circuit focused on how the tracer dye study and Maui's admissions removed any question that the disposal wells were connected to the Pacific Ocean. The Ninth Circuit also rejected Maui's argument that discharges to navigable waters had to be directly from the point source to the navigable water.

A Multitude of Factors Means Little Guidance for Dischargers, Regulators, and Courts

The Supreme Court's non-exhaustive list of seven factors were provided to help determine whether a

discharge through groundwater is a "functional equivalent" to a direct discharge, and thus, would require an NPDES permit. Unfortunately, this list does not provide bright line guidance to those implementing the new rule. Indeed, the functional equivalent test, and its many factors, were not actually considered or applied by the Supreme Court in *County of Maui*. Rather, the Supreme Court remanded the case to the Ninth Circuit to apply its rule. Another pending Clean Water Act case involving discharges to groundwater, *Kinder Morgan Energy, et al. v. Upstate Forever, et al.*, (4th Cir. 2018), [*see*: https://www.upstateforever.org/files/files/4th%20Circuit%20Decision.pdf] (*Kinder Morgan*), saw a similar result and was remanded to the Fourth Circuit Court of Appeals, on May 4, 2020 for reconsideration based on the "functional equivalent" rule.

The primary guidance in the *County of Maui* opinion bookends what the Supreme Court believes would qualify for Clean Water Act permitting, and what most likely would not be considered a "functional equivalent." Specifically, the Supreme Court states that when a point source is "a few feet" from a navigable water, such that the discharge travels through groundwater for that short distance, this is functionally equivalent to a direct discharge and would require an NPDES permit. A similar discharge that flows for a few feet over the beach would also require a permit. On the other end, if a point source is located miles away from the navigable water and the discharged pollutants travel within the groundwater, mixing with other materials and only reaching navigable waters years later, then the discharge likely does not need an NPDES permit. For discharges somewhere in between these two ends, the "middle instances" in the Supreme Court's parlance, the opinion provides little guidance.

The Supreme Court also provided some assurance, in *dicta*, that EPA and judges would not extend the functional equivalent rule so far that NPDES permits would be required for all disposal wells or all domestic septic systems. But this, too, could present "sliding scale" challenges in areas where beach houses have septic systems or where disposal wells have suspected, but difficult to discern, hydrologic connections to navigable waters. The exceptions in some instances may prove to swallow the rule.

The numerous factors and lack of guidance in terms of applying the rule to a set of specific facts resembles the Supreme Court's "significant nexus" test for determining whether a water is subject to Clean Water Act jurisdiction in *Rapanos v. United States*, 547 U.S. 715 (2006) (*Rapanos*). This test required dischargers, regulators, and judges to consider a range of factors in order to determine whether the Clean Water Act applied in cases where "wetlands, either alone or in combination with similarly situated lands in the region, *significantly affect* the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'" In that case, the Supreme Court opined that, when "wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the term 'navigable waters.'" In the dozen years since the *Rapanos* decision's release, the EPA has struggled to articulate regulations governing which waters are subject to Clean Water Act jurisdiction, with the two most recent versions of such rules—the 2015 WOTUS rule and the 2020 WOTUS rule—being the subject of multiple legal challenges.

Based on the fact-specific nature of the functional equivalent rule, regulators and courts will face challenges similar to those following *Rapanos*. Indeed, connectivity and chemical and physical attributes are at issue in both *Rapanos* and *County of Maui*. The lack of clear guidance presents challenges for dischargers and regulators in determining whether a specific discharge to groundwater requires an NPDES permit. The lack of clarity also may subject dischargers and regulators to lawsuits for failing to obtain or issue NPDES permits for specific discharges. These issues were raised in Justice Alito's dissent in *County of Maui*. Justice Alito criticized the majority opinion for failing to provide additional guidance while admitting that the functional equivalent rule "'does not, on its own, clearly explain how to deal with the middle instances.'" Justice Alito also expressed concern that in any case, other than an extreme instance, "[r]egulators will be able to justify whatever result they prefer in a particular case."

Until courts begin applying the functional equivalent test to actual factual scenarios, the test itself, and its non-exhaustive list of potentially relevant factors, remain conceptual. Clarity on the operation of this rule—and on whether certain discharges to groundwater require an NPDES permit—is yet to come.

The 'Functional Equivalent' Test Might Not Be So Different than a 'Fairly Traceable' Test

The lack of clarity and application of the functional equivalent test also calls into question whether, and to what degree, the test is different than the "fairly traceable" test proposed by the Ninth Circuit. Despite the Supreme Court's insistence that the functional equivalent rule is narrower than the Ninth Circuit's rule, substantial similarities remain.

For example, the Supreme Court's test requires a permit where "there is a direct discharge from a point source into a navigable water or when there is the *functional equivalent of a direct discharge*." The Ninth Circuit proposed that a permit is required where "pollutants are fairly traceable from the point source to a navigable water such that the discharge is the *functional equivalent of a discharge into the navigable water*." Most of the substantive words mirror one another.

When joined with the factors listed by the Supreme Court, the "functional equivalent" test considers how far and how long pollutants have traveled, as well as how much the pollutants have changed or diluted between the point source discharge into groundwater and their emergence in a navigable water. This seems to reflect the analysis the Ninth Circuit conducted when applying the "fairly traceable" test to the facts in *County of Maui*. The Ninth Circuit determined that the discharge was subject to the Clean Water Act because the tracer dye studies showed the connection between the point source and the emergence of the pollutants in the Pacific Ocean. The study showed the time and distance traveled, as well as the relative amount of the discharge that reached navigable waters. In spite of the Supreme Court's insistence that the "functional equivalent" rule is narrower than the Ninth Circuit's "fairly traceable" standard, the difference between the two does not appear to be great.

Despite the use of the phrase "fairly traceable," the lack of the word "direct" by the Ninth Circuit may be the largest difference between the words used in the two approaches. The use of the term "direct" may be the key to the "functional equivalent" rule being understood and applied in a narrower fashion than the "fairly traceable" test. Depending on how closely the groundwater discharge resembles a "direct" discharge, this could influence the balance of the factors and the relative showing needed for each factor in order to come to the conclusion that a discharge to groundwater requires an NPDES permit.

The Ninth Circuit declined to determine at the time when the connection between a point source discharge to groundwater is "too tenuous" to be considered "fairly traceable." In doing so, the Ninth Circuit expressed skepticism that any pollutants reaching navigable waters traceable back to a point source discharge would be too attenuated for Clean Water Act liability to apply. The Supreme Court, in contrast, did provide an example of a discharge too tenuous to be considered a "functional equivalent" of a direct discharge to navigable waters. In this sense, the "functional equivalent" is narrower than the "fairly traceable" test, by virtue of there being at least some enunciated scenario where a discharge to groundwater that reached navigable waters is too far removed to be considered roughly similar to a direct discharge.

Conclusion and Implications—The 'Functional Equivalent' Standard Begins a Chapter of Uncertainty

The Supreme Court confirmed that some point source discharges to groundwater that reach navigable waters require NPDES permits, but did not alleviate much of the confusion about just which discharges need NPDES permits. Until the "functional equivalent" test is applied to specific sets of facts, it will be difficult to fully understand what the rule, or any of its terms, means in any practical sense. Because the Supreme Court declined to apply the test to the facts at issue in both *County of Maui* and *Kinder Morgan*, practitioners, dischargers, regulators, and courts are left with little guidance on application and meaning beyond relatively extreme examples provided. This uncertainty as to exactly which discharges require an NPDES permit will likely continue even after the Ninth Circuit and Fourth Circuit reconsider these cases due to the fact-specific nature of the "functional equivalent" test. The Supreme Court's Slip Opinion in *County of Maui, Hawaii v. Hawaii Wildlife Fund*, Case No. 18-260, 590 U.S. ___ (2020) is available online at: https://www.supremecourt.gov/opinions/19pdf/18-260_jifl.pdf

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CLIMATE CHANGE NEWS

GOVERNOR NEWSOM ISSUES EXECUTIVE ORDER THAT SUSPENDS CERTAIN NOTICING DEADLINES UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

Recently, California Governor Gavin Newsom issued an Executive Order suspending various timeline aspects of the California Environmental Quality Act (CEQA). This will be relevant to all CEQA practitioners in the areas of land use and water law.

Background

The COVID-19 global pandemic has resulted in extensive federal, state and local legislation touching various topics, from government relief to eviction moratoriums. In California, these mandates have also impacted some of the rules that would typically apply to matters governed by the California Environmental Quality Act. On April 22, 2020, Governor Gavin Newsom issued Executive Order N-54-20, which includes provisions that *suspend* the filing, posting, notice, and public access requirements related to certain notices under CEQA for a period of 60 days. This suspension does not apply to provisions governing the time for public review.

CEQA Provisions Suspended

The specific CEQA provisions that are subject to Executive Order N-54-20's 60-day suspension are below.

- Public Resources Code § 21092.3—requiring that notices relating to the preparation and availability of an Environmental Impact Report (EIR) to be posted by the county clerk for 30 days, and requiring a notice of intent to adopt a negative declaration to be posted for 20 days.

- Public Resources Code § 21152—governing local agency requirements for filing notices of determination and notices of exemption.

- CEQA Guidelines § 15062, subds. (c)(2) and (c)(4)—governing a public agency's filing of a notice of exemption for projects that are exempt from CEQA.

- CEQA Guidelines § 15072, subd. (d)—requiring notice of intent to adopt a negative declaration or mitigated negative declaration to be posted at the office of the county clerk for at least 20 days.

- CEQA Guidelines § 15075, subds. (a),(d), and (e)—requiring the lead agency to file a notice of determination within five days of deciding to approve a project for which there has been a negative declaration or mitigated negative declaration prepared. This section also requires the notice of determination to be posted by the county clerk for at least 30 days.

- CEQA Guidelines § 15087, subd. (d)—requiring that a notice of availability of a draft environmental impact report for public review be posted at the office of the county clerk for at least 30 days.

- CEQA Guidelines § 15094, subds. (a), (d), and (e)—requiring the lead agency to file a notice of determination within five days of deciding to approve a project for which an environmental impact report was approved. This section also requires the notice of determination to be posted by the county clerk for at least 30 days.

Use of Electronic Means

Section 8 of Executive Order N-54-20 will also allow certain notice requirements under CEQA to be satisfied through electronic means in order to allow public access and involvement consistent with COVID-19 public health concerns. The order's electronic noticing provisions are as follows:

> In the event that any lead agency, responsible agency, or project applicant is operating under any

of these suspensions, and the lead agency, responsible agency, or project applicant would otherwise have been required to publicly post or file materials concerning the project with any county clerk, or otherwise make such materials available to the public, the lead agency, responsible agency, or project applicant (as applicable) shall do all of the following:

a) Post such materials on the relevant agency's or applicant's public-facing website for the same period of time that physical posting would otherwise be required;

b) Submit all materials electronically to the State Clearinghouse CEQAnet Web Portal; and

c) Engage in outreach to any individuals and entities known by the lead agency, responsible agency, or project applicant to be parties interested in the project in the manner contemplated by the Public Resources Code § 21100 *et seq*. and California Code of Regulations, Title 14, § 15000 *et seq*.

Tribal Consultations

Executive Order N-54-20 also has a provision regarding CEQA's tribal consultation process. Under the § 9 of the order, the timeframes set forth in Public Resources Code §s 21080.3.1 and 21082.3, within which a California Native American tribe must request consultation and the lead agency must begin the consultation process relating to an Environmental Impact Report, Negative Declaration, or Mitigated Negative Declaration under CEQA, are suspended for 60 days.

Conclusion and Implications

In addition, Executive Order N-54-20 encourages lead agencies, responsible agencies, and project applicants to pursue additional methods of public notice and outreach as appropriate for particular projects and communities.

Governor Newsom's Executive Order of April 22, 2020 predominantly suspends certain important deadlines. This 60-day suspension periods imposed by Executive Order N-54-20 are set to expire on June 22, 2020. It will be important for CEQA practitioners to review all the temporary changes made as deadlines and notice requirements play a crucial role in compliance. Executive Order N-54-20 may be accessed online at the following link: https://www.gov.ca.gov/wp-content/uploads/2020/04/N-54-20-COVID-19-4.22.20.pdf
(Nedda Mahrou)

LOS ANGELES HAS THE CLEANEST AIR IN THE WORLD DURING COVID-19 SHELTER-AT-HOME

Following the state and local shelter-at-home orders, with so many people staying at home and off the roads, Los Angeles has been reported to have the cleanest air in the world, according to the reporting service, IQ Air.

Background

In the wake of the state-wide "Shelter-At-Home" orders, many Los Angeles residents began working from home, dramatically lowering the number of commuters on the road. As of mid-March, L.A.'s infamous rush-hour traffic was moving 71 percent faster than it usually does, according to the *New York Times*. https://www.nytimes.com/interactive/2020/03/22/climate/coronavirus-usa-traffic.html

According to the U.S. Environmental Protection Agency, Los Angeles has recently experienced the longest consecutive number of "good" air days since at least 1980. Federal online data goes back no further, but some experts venture Los Angeles' air has not been this clean since around the time the United States entered World War II. The improvement comes not only from fewer cars on the road, but is due to fewer planes flying and less ground activity in general.

A study conducted by UCLA's Fielding School of Public Health found there was a 20 percent improvement in overall air quality in southern California between March 16 and April 6, covering the first few weeks of the stay-at-home orders. That study found a 40 percent drop in levels of PM 2.5, a class of microscopic air pollutants that have been linked to serious cardiovascular and respiratory problems. Another study linked exposure to PM 2.5 to an increased risk

of death from COVID-19. https://projects.iq.harvard.edu/files/covid-pm/files/pm_and_covid_mortality.pdf

A Temporary Reprieve

Since California's stay-at-home order went into effect, the UCLA team has found that traffic across the state has fallen by around 80 percent. This is likely the single largest contributor to the cleaner air. The coronavirus has forced many of the world's biggest countries to restrict people's movements, and similar declines in air pollution have been observed around the globe—in India, China, Europe, and throughout the United States.

In normal times, the infamous Los Angeles smog begins as a cloud of traffic emissions, spewed into the air as millions of commuters head to work during morning rush hour. That layer of air pollution is then held in place by a combination of southern California's topography and its prevailing weather patterns. That air pollution is then baked for hours in the area's ultraviolet rays, an effect that air-quality experts analogize to a pot of soup heating on a stove.

Unfortunately, the pollution reductions are likely to be temporary. As lockdowns lift and commutes resume, air quality is likely to decline again. Beyond that, these reductions do not provide a workable path forward on climate change, given that these gains have come at a massive cost in terms of lives and livelihoods lost.

What these reductions do display, however, is that air pollution is not as intractable as we often believe. Short term changes to our behavior alone will not create long term solutions, and stay-at-home orders do not come close to properly balancing interests here, but the quick progress displayed during early weeks of the current quarantine shows that society is more adaptable than conventional wisdom often suggests.

Conclusion and Implications

Even COVID-19 has its silver linings. The present gains in the fight against pollution are likely temporary, and no advocated would call to continue the present stay-at-home orders beyond their necessity to combat the coronavirus. Yet the possibility that COVID-19 will change the way we think about work and commuting long term is strong. The current crisis is a time to consider how much driving we do on a daily basis, and whether we need to do as much of it even once the current orders have lifted. Telecommuting and working remotely may become more common following this extended period of forced quarantine, and long-term shifts in our approach to cars may have long-term effects on Los Angeles air quality. IQAir's report on this is available online at: https://www.iqair.com/us/world-air-quality-ranking
(Jordan Ferguson)

CLIMATE CHANGE SCIENCE

RECENT SCIENTIFIC STUDIES ON CLIMATE CHANGE

Tropical Cyclones May Become More Damaging under Climate Change

Tropical cyclones—hurricanes, tropical depressions, tropical storms—can cause substantial damage. In recent years, cities have been hit hard by storms like Hurricanes Dorian, Maria, and Irma, which each cost billions of US dollars in damages to buildings, infrastructure, agriculture, etc. on top of loss of human lives. According to the Congressional Budget Office, approximately 0.3 percent of the US annual GDP (approximately $54 billion USD) goes toward hurricane-related damage each year. (Congressional Budget Office. 2019. Expected Costs of Damage from Hurricane Winds and Storm-Related Flooding. April. Available at: https://www.cbo.gov/system/files/2019-04/55019-ExpectedCostsFromWindStorm.pdf) The amount of damage a tropical cyclone does is related, in part, to how quickly the storm moves. A slow-moving storm that makes landfall will cause significantly more accumulated damage than a faster-moving storm since it will impact a given area for longer.

For this reason, a research team out of Princeton University, conducted research to understand how the speed of tropical cyclones is anticipated to change under a changing climate. To do this, they run numerous large-scale circulation models and tropical cyclone motion models and evaluate how cyclonic motion changes. They perform two separate analyses: one for historic conditions (1951-2010) and one for future warming; with this, they can validate the future warming projections by comparing the results of the historic conditions modeled with actual historic data. Ultimately, they find that anthropogenic (human-caused) climate warming is correlated with slower tropical cyclones. This occurs because increased warming changes global circulation by pushing major airstreams poleward. This effect is projected to be most prominent in the midlatitudes, which include densely populated coastal areas in the United States and Asia where damages are compounded by increased human development.

As policymakers evaluate the costs and benefits associated with various climate change adaptation or mitigation strategies, studies such as this one will be fundamental to making informed policy decisions. If scientists are able to project changes in hurricane speed and accumulated damages under various climate strategies, policymakers can use this information to make cost-effective and health-protective decisions about climate.

See: Zhang, G., et al. Tropical cyclone motion in a changing climate. *Science Advances*, 2020; https://dio.org/10.1126/scladv.aaz7610

Ability for Hydropower Generation to Meet Energy Demands and Reduce CO_2 Emissions in Sumatra under 1.5°C and 2°C Global Warming Scenarios

Renewable energy technologies currently play an essential role in reducing dependence on fossil fuels and decreasing CO_2 emissions. The role of renewable energy will continue to grow more important as countries around the world consider the best methods for fighting climate change and preventing global temperature from increasing to 2°C above pre-industrial levels. As of 2015, hydropower constituted 17 percent of global energy production and 70 percent of all renewable energy production, with current levels of production expected to double by 2050. While renewable energy technologies can play a significant role in reducing carbon emissions, their effectiveness may be inherently intertwined with the effects of climate change. In 2018, the Intergovernmental Panel on Climate Change released a report comparing the influences of climate change on an array of environmental parameters under 1.5°C and 2°C warming scenarios. Meng et al. of Harbin Institute of Technology in China and a team of international researchers noticed a gap in the literature when it comes to the impact of climate change under these two scenarios on hydropower generation. They focused their research on the Indonesian island of Sumatra due to its susceptibility to sea-level rise, mountainous terrain,

high rainfall, high fossil fuel usage rate, and projected increase in energy demand.

The researchers first used global climate models to identify the years in which global warming would reach 1.5 and 2°C above pre-industrial levels. They identified these years as 2036 (or 2033 depending on the radiative forcing assumptions) and 2056, respectively, with 1971-2010 representing the historical period to compare results to. The researchers then used a hydrological model known as PCR-GLOBWB to calculate hydropower generation potential at 50 km x 50km resolution along rivers. Finally, a model called BeWhere was used to identify optimal hydropower locations based on factors including hydropower potential, ability to meet power demands using existing electrical infrastructure, and lowest cost. The model results indicate that hydropower generation can meet at least 94 percent of Sumatra's power demand under all scenarios considered, but this assumes unrestricted land use. Many of these locations are in protected areas. Taking these lands out of consideration, hydropower generation can meet only 11.9 percent, 54.3 - 56.9 percent, and 14.2 percent of demand under the historical, 1.5°C, and 2°C warming scenarios, respectively. These results indicate the complicated nature of climate change—1.5°C warming will actually benefit hydropower production relative to historical trends, which could be used as an advantage in reducing CO_2 emissions. Once 2°C warming is reached, the detrimental effects become dominant and greatly reduce the effectiveness of hydropower. Furthermore, if all lands were available for hydropower generation, CO_2 emissions could be reduced by 68 million tons relative to fossil fuel use, with higher reductions under the 1.5°C scenario than the 2°C scenario. Once protected areas are removed from consideration, the benefits drop dramatically to between 0.7 - 3.6 million tons of CO_2 avoided.

The researchers suggest that their study could be improved upon by incorporating geological data and using hydrological data with higher spatial resolutions. Based on their findings, the researchers call for policy makers to re-examine the trade-offs between protecting lands and reducing carbon emissions with respect to hydropower use.

See: Meng, Y., Liu, J., Leduc, S., Mesfun, S., Kraxner, F., Mao, G., et al. (2020). Hydropower production benefits more from 1.5 °C than 2 °C climate scenario. *Water Resources Research*, 56, e2019WR025519. https://doi.org/10.1029/2019WR025519

Understanding Population Exposure to Climate Extremes

As climate change becomes exacerbated by the release of greenhouse gas emissions to the atmosphere, climate extremes are anticipated to occur more frequently. Climate extremes include phenomena such as floods, droughts, heatwaves, cold waves, and many others that can affect populations of people on a regional scale. Not only are climate extremes responsible for negative impacts to human health and wellbeing, they have also cost the United States roughly $1.75 trillion in damages since 1980. Within the years 1980 through 2019, there was a long-term average of 6.5 extreme climate events per year; however, when isolating the years 2015 through 2019, the average has increased to 13.8 extreme climate events per year. Understanding the changes in exposure of human populations to climate extremes will become increasingly important as global warming continues to impact the planet.

In a recent study prepared for the American Geophysical Union, Batibeniz et al. aim to quantify the changes in the spatial pattern of extreme climate using the Climate Extremes Index (CEI), a high-resolution regional climate model, current population estimates, and future period population projections. Specifically, this study analyzes various measures of hot, cold, wet, and dry extremes on seasonal and annual timescales within nine climate regions. In order to understand the relationship between radiative forcing and compounded extremes that exceed the thresholds to which humans have become accustomed, a metric called "time of emergence" is employed. The time of emergence quantifies the time when future changes permanently exceed the baseline variability, which is measured by one standard deviation during the 1981 through 2005 time period. Under the Representative Concentration Pathway 8.5, all counties within the United States are predicted to permanently exceed the baseline variability in the frequency of climate extremes by 2050.

The primary driver for the time of emergence of all United States counties by 2050 is increases in exposure to warm nights. Compared to daytime temperatures, nighttime temperatures are rising at a much faster rate with the changing climate. This

phenomenon can increase the risk of heat-related mortality and sleep loss in humans, and decrease the yield efficiency of agricultural crops. Though rising nighttime temperatures cause negative consequences in regions that are vulnerable to heat stress, the same rise in nighttime temperatures can decrease exposure to cold-related climate extremes in regions that are vulnerable to cold stress. However, the projected decreases in regions vulnerable to cold stress (-4 percent) are smaller than the projected increases (14 percent) experienced in heat-related climate extremes. The net increase in frequency of climate extremes directly relates to the likelihood of human exposure to such events; specifically, the study found that by 2050 one in three people will be exposed to an extreme climate event each year.

See: Batibeniz, F., Ashfaq, M., Diffenbaugh, N. S., Key, K., Evans, K. J., Turuncoglu, U. U., & Önol, B. (2020). Doubling of U. S. population exposure to climate extremes by 2050. Earth's Future, 8, e2019EF001421. https://doi.org/10.1029/2019EF001421

(Abby Kirchofer, Libby Koolik, Shaena Berlin Ulissi, Ashley Krueder)

REGULATORY DEVELOPMENTS

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD ADOPTS PERMANENT MONTHLY WATER USE REPORTING REQUIREMENTS

Building upon its emergency regulations imposed during the incredible drought years of 2014 and 2017, the California State Water Resources Control Board (SWRCB) recently made permanent regulations mandating urban water suppliers to track and report monthly water usage.

Background

During California's recent historic drought, the SWRCB adopted emergency regulations that required California's largest water suppliers—those with more than 3,000 connections or supplying more than 3,000 acre-feet of water annually—to track and report monthly water usage. These urban water suppliers collectively represent the state's 400 largest water suppliers and serve approximately 90 percent of the state's population. The regulations were put into effect generally from July 2014 through November 2017, in an effort to maximize water conservation throughout the state. Many considered those efforts largely successful. Between June 2015 and March 2017 California's urban water suppliers collectively conserved 22.5 percent water use compared to prior years, enough to supply approximately one-third state's population for one year.

In late 2017, the SWRCB modified the reporting mandates and generally transitioned toward voluntary reporting. Notwithstanding that transition, more than 75 percent of water suppliers have continued to report their monthly water usage voluntarily. In May 2018, the Governor signed into law water efficiency legislation that authorized the SWRCB to issue permanent mandatory monthly water use requirements on a non-emergency basis.

Monthly Reporting Requirements

The new SWRCB regulation requires water suppliers to report residential water use, total potable water production, measures implemented to encourage water conservation and local enforcement actions. Specifically, the regulation requires reporting of the following:

- The urban water supplier's public water system identification number(s);

- The urban water supplier's volume of total potable water production, including water provided by a wholesaler, in the preceding calendar month;

- The population served by the urban water supplier during the reporting period;

- The percent residential use that occurred during the reporting period;

- The water shortage response action levels.

The SWRCB considers these measures as part of the state's long-term plan to prepare California for future droughts. The regulation increases transparency and access to important and timely water data, and in a format consistent with reporting provided since 2014.

In adopting the regulation, the Chairman of the SWRCB stated:

- As we continue to see, the quality, timeliness, and gathering of data are critical to managing California's water in the 21st century. Urban monthly water use data have driven enduring, widespread, public awareness and understanding of water use, conservation and efficiency in our state.

The regulation now moves to the Office of Administrative Law for review and is expected to take effect October 1, 2020.

Conclusion and Implications

The recently adopted regulation will likely assist policy makers in making important and better-informed water resources management decisions moving forward. It will also help water managers and Californians working together to monitor statewide and local water usage conditions and improve ef-

fectiveness in responding to future water shortage challenges. Though reporting is once again mandatory, with more than 75 percent of water suppliers already voluntarily reporting water usage during the past three years, many are observing what appears to be a post-drought culture change among stakeholders who have taken greater ownership and responsibility in achieving water conservation. This recent move could potentially strengthen that dynamic and continue to yield increased conservation results. For more information, *see:* https://www.waterboards.ca.gov/press_room/press_releases/2020/pr04212020_swrcb_adopts_water_conserv_rpt_req.pdf
(Chris Carrillo, Derek R. Hoffman)

PENALTIES & SANCTIONS

RECENT INVESTIGATIONS, SETTLEMENTS, PENALTIES AND SANCTIONS

Editor's Note: Complaints and indictments discussed below are merely allegations unless or until they are proven in a court of law of competent jurisdiction. All accused are presumed innocent until convicted or judged liable. Most settlements are subject to a public comment period. Due to COVID-19, there were significantly less items to report on this month.

• April 23, 2020 - The U.S. Environmental Protection Agency announced that TAPI Puerto Rico, Inc. (TAPI) has agreed to pay a penalty of $539,784 for alleged federal Clean Air Act and other environmental violations at its pharmaceutical manufacturing plant in Guayama, Puerto Rico. On April 13, 2020, the Department of Justice filed in federal district court in Puerto Rico a complaint against and a Stipulation and Settlement Agreement with TAPI to settle alleged violations of the Clean Air Act, the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, and the Emergency Planning and Community Right-to-Know Act. The EPA identified several areas of the facility's operations that were in violation of environmental regulations. A few of the numerous alleged violations include the following. Since TAPI had the potential to emit over 10 tons/year of acetonitrile, a hazardous air pollutant, TAPI was subject to the Clean Air Act's Pharmaceutical Maximum Achievable Control Technology Standards (MACT) and it should have amended its Title V permit application to include the Pharmaceutical MACT requirements. TAPI failed to comply with the hazardous waste regulatory requirements that would have allowed it to store hazardous waste for under 90 days without a permit, and therefore did not qualify for the permit exemption; TAPI stored and/or treated hazardous waste in a surface impoundment without a permit; TAPI failed to maintain and operate the Facility in a manner that would minimize the possibility of fire, explosion or any unplanned sudden or non-sudden release of hazardous waste that could threaten human health or the environment as required by its RCRA permit. The company also failed to timely submit to EPA annual toxic chemical release inventory reporting for its use of naphthalene in its operations as required by the Emergency Planning and Community Right-to-Know Act. The company also failed to submit timely reports to EPA's annual Toxics Release Inventory, as required by the Emergency Planning and Community Right-to-Know Act, for its use of naphthalene in its operations. TAPI violated its Puerto Rico wastewater pretreatment permit by failing to operate and maintain its pretreatment systems to ensure permit compliance. This included, among other violations, wastewater leaking from a corroded tank, large cracks in three tanks and an overflow of an equalization tank. TAPI's parent company, Teva Pharmaceuticals Industries Ltd, is a multinational pharmaceutical company and one of the largest generic drug manufacturers in the world. EPA will continue to monitor developments associated with the parties. However, the violations are no longer occurring as the facility ceased operating.

• April 29, 2020 - EPA announced a settlement with American Zinc Recyling for alleged violations of the Clean Air Act from its zinc metal refining facility in Chicago. American Zinc Recycling, at 2701 E 114th St. in Chicago, recycles metal-bearing wastes from steel production to reclaim zinc and other metals. EPA observed particulate emissions and fugitive dust from American Zinc Recycling's operations during inspections of the facility in alleged violation of particulate matter limits in the Illinois' State Implementation Plan, the Clean Air Act and American Zinc Recycling's Title V permit issued by the State of Illinois. The facility is located on the Calumet River in the Southeast Side of Chicago, where the federal, state, and local government have worked with community groups to reduce pollution from other facilities. Under the terms of the settlement, American Zinc Recycling will invest approximately $8 million to bring the facility back into compliance with its emissions limits, with improved capture and collection systems for particulate matter and dust. The

company will also pay a $530,000 penalty. Particulate matter is defined as a mixture of solid particles and liquid droplets found in the air. Breathing air with high levels of particulate matter has been linked to heart and respiratory problems. Reducing particulate matter means cleaner, healthier air for all Chicagoans. The settlement terms are included in a proposed consent decree that U.S. Department of Justice filed.

•April 30, 2020 - EPA has identified numerous companies and individuals who have manufactured and sold both hardware and software specifically designed to defeat required emissions controls on vehicles and engines used on public roads as well as on nonroad vehicles and engines. Cars and trucks manufactured today emit far less pollution than older vehicles. This occurs through careful engine calibrations and emissions controls in exhaust systems such as catalytic converters and diesel oxidation catalysts. Aftermarket defeat devices bypass these controls and cause higher emissions. EPA testing has shown that these devices can increase vehicle emissions substantially. Illegally modified vehicles and engines contribute substantial excess pollution that harms public health and impedes efforts by EPA, tribes, states, and local agencies to plan for and attain air quality standards. In an on-going effort to address this air quality problem, EPA has resolved more than 50 cases addressing these types of violations since 2015. The announcement highlights three such cases that have been resolved administratively:

Freedom Performance, LLC was a major web-based distributor of diesel defeat device products. On February 24, 2020, EPA's Chief Administrative Law Judge (ALJ) issued a default judgment against Freedom Performance, LLC, ordering a $7.058 million penalty for 13,928 violations of the aftermarket defeat device prohibition of the Clean Air Act (CAA).

Spartan Diesel was ordered to pay a $4.1 million penalty for 5,000 violations of the aftermarket defeat device prohibition of the CAA on October 30, 2018, by the ALJ.

KT Performance is a Florida-based company that sold and installed approximately 2,833 delete products for diesel-powered trucks between January 2013 and April 2018. EPA filed an administrative complaint against KT Performance for violations of the aftermarket defeat device and tampering prohibitions of the CAA on April 30, 2018. The parties resolved the matter on July 3, 2018. The company was assessed a civil penalty of $52,284 that was calculated based on a demonstrated inability to pay a higher amount.

•In April 2020, the California Air Resources Board (CARB) announced a settlement with American Honda Motor Co., Inc. for $1,927,800 for violations of California regulations governing evaporative emission control systems in small off-road engines. CARB conducted compliance testing, in 2017 on Honda's small off-road engines used in various lawn and garden equipment to determine if the engines met diurnal emissions standards. CARB found that the engines exceeded their certified evaporative model emission limit. Under the settlement, Honda will pay a $21.29 per unit penalty, resulting in a total penalty of $1,927,800. As part of the settlement, Honda has agreed to provide $963,900 of the total penalty to supplemental environmental projects. Honda has raised its evaporative model emission limit and given up emissions credits to offset excess emissions from the non-compliant units.

•In April 2020, CARB announced that CMA CGM S.A., of Marseille, France, had reached a settlement with CARB for violations of the Ocean-Going Vessels Fuels Regulation. CMA CGM S.A. will pay penalties of $165,920. The violations were discovered during a routine inspection by CARB staff. The investigation showed that the CMA CGM S.A. vessel *CMA CGM A. Lincoln* failed to operate on compliant fuel upon entry into regulated California waters in 2018. CARB alleged violations totaling twenty-two days and fifty-two hours. CMA CGM S.A. took prompt action after being notified of these violations and under CARB's supervision began operating in compliance.

•In April 2020, the California Air Resources Board (CARB) announced that it had settled with Drybar Products LLC and Drybar Holdings LLC for selling, offering for sale, and manufacturing two aerosol hair styling products for use in California containing concentrations of volatile organic compounds exceeding regulatory limits. Drybar will pay a $155,380 penalty. Drybar has modified its product to come into compliance with California regulations.

•May 14, 2020—EPA announced that DTE Energy will reduce pollution at five coal-fired power plants in southeast Michigan in a settlement. The settlement also requires DTE Energy to pay a $1.8 million civil penalty and to undertake a $5.5 million mitigation project to improve air quality in the region by replacing old buses in the area with newer, cleaner ones. The settlement resolves a lawsuit filed by the United States against DTE Energy in 2010, alleging that the company violated the New Source Review requirements of the Clean Air Act. Under the settlement with EPA, DTE Energy will install pollution controls or convert to natural gas all coal-fired units at its Belle River, River Rouge, St. Clair and Trenton Channel generating stations. DTE must also meet enforceable emission limits for sulfur dioxide and nitrogen oxide at its Monroe Generation Station. Upon completion of all requirements under this settlement, sulfur dioxide and nitrogen oxide emissions at all of DTE's facilities in Southeast Michigan will be reduced by an estimated 138,000 total tons per year when compared to the year 2010. The settlement also requires DTE to develop and implement a mitigation project to replace school buses or municipal transit buses in Southeast Michigan with new, more energy-efficient buses to reduce the public exposure to harmful particulate matter and nitrogen oxide. This settlement will help protect human health and the environment while also ensuring that Detroit-area residents continue to have access to affordable electricity. Sulfur dioxide and nitrogen oxides, two key pollutants emitted from coal-fired power plants, can harm human health and are significant contributors to acid rain, smog, and haze. These pollutants are converted in the air into fine particles that can cause severe respiratory and cardiovascular impacts and premature death. Reducing these harmful air pollutants will benefit communities in southeast Michigan and beyond.

•May 14, 2020—EPA has reached settlements with two agricultural storage and supply businesses to resolve alleged violations of federal Clean Air Act regulations. EPA inspected both companies in response to accidental releases of anhydrous ammonia that resulted in injuries to their employees. EPA inspections determined that the companies failed to design their processes for handling anhydrous ammonia in compliance with good engineering practices, and failed to meet other requirements intended to ensure adequate measures are in place to prevent and respond to an accidental release from the facilities. Anhydrous ammonia presents a significant health hazard because it is corrosive to the skin, eyes and lungs. Exposure may result in injury or death. Midland Marketing Co-op Inc. owns one facility in Palco, Kansas; and Troy Elevator Inc. owns two facilities in Bloomfield and Blakesburg, Iowa. Each of the three facilities contain over 10,000 pounds of anhydrous ammonia, making them subject to Risk Management Program regulations intended to protect communities from accidental releases of certain toxic or flammable substances. In response to the EPA inspection findings, both companies took the necessary steps to bring all three facilities into compliance. As part of its settlement, Midland Marketing Co-op agreed to pay a civil penalty of $19,999. The company also agreed to purchase emergency response and preparedness equipment for three local fire departments at an estimated cost of $25,569. Troy Elevator agreed to pay a civil penalty of $37,063 to resolve the alleged violations. EPA has found that many regulated facilities are not adequately managing the risks they pose or ensuring the safety of their facilities in a way that is sufficient to protect surrounding communities. Approximately 150 catastrophic accidents occur each year at regulated facilities. These accidents result in fatalities, injuries, significant property damage, evacuations, sheltering in place, or environmental damage. Many more accidents with lesser effects also occur, demonstrating a clear risk posed by these facilities.

•April 24, 2020—The EPA issued a Stop Sale, Use or Removal Order (SSURO) to Seal Shield, LLC (Seal Shield) in Orlando, Florida, requiring the company to immediately halt the sale/distribution of unregistered pesticides and a misbranded pesticide device. The SSURO is being issued to Seal Shield because it is selling products to hospitals and other healthcare providers using public health claims for protection against viruses and reduction of microbial growth leading to hospital acquired infections. In order for Seal Shield to make these claims, the products would need to be registered under Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). These products include, but are not limited to, computer external equipment, mobile devices and TV accessories. The SSURO further requires Seal Shield to

stop the sale and distribution of the pesticide device ElectroClave UV Disinfection/Device Manager, because Seal Shield has made false or misleading claims that the device kills pathogens and is effective against the novel coronavirus, SARS-CoV-2, the cause of COVID-19. Under FIFRA, products that claim to kill or repel bacteria or viruses on surfaces are considered pesticides and must be registered by EPA prior to distribution or sale. Public health claims can only be made for products that have been properly tested and are registered with EPA. The agency will not register a pesticide until it has been determined that it will not pose an unreasonable risk when used according to the label directions. Products not registered by EPA may be harmful to human health, cause adverse health effects, and may not be effective against the spread of viruses or other pathogens. While pesticide devices are not required to be registered, any efficacy claims made about devices must be supported by reliable scientific studies.
(Allison Smith)

LAWSUITS FILED OR PENDING

NEW LAWSUIT FILED IN MONTANA STATE COURT CLAIMING STATE'S ENERGY POLICIES CAUSE INJURY TO 'YOUTH' PLAINTIFFS DUE TO CLIMATE CHANGE

A group of young plaintiffs have filed suit in March 2020 against the State of Montana seeking injunctive and declarative relief from state energy polices, which they allege, have caused "climate disruption." The young plaintiffs, on claims based on the Montana Constitution and public trust doctrine, allege that their futures are being compromised by the state. [*Held, et al., v. State of Montana, et al.*, (1st Dist Ct. Mt 2020).]

Background

There have been in the past few years several lawsuits filed, brought by "youth" plaintiffs, against oil companies seeking relief on theories that big oil is aware that the fossil fuel production and intended use is a known cause of climate change, endangering plaintiffs lives and futures. However, recently, a group of young plaintiffs filed a lawsuit in Montana state court. This is a novel approach that may insulate the plaintiffs from some of the hurdles experienced by other youth lawsuits filed in federal court.

The Lawsuit

In *Held, et al., v. The State of Montana,* filed in the First Judicial District Court for Lewis and Clark County, in Helena, the plaintiffs consist exclusively of youth plaintiffs through their guardians. Their target: The State of Montana and its energy policies related to fossil fuels. The lawsuit seeks declaratory and injunctive relief. The action states four claims:

- The Right to Clean and Healthful Environment Including a Stable Climate System;
- The Right to Seek Safety, Health and Happiness;
- Individual Dignity and Equal Protection; and
- Protection of Montana's Clean and Healthful Environment and Public Trust Resources for Present and Future Generations. (* these and all other quotations herein are in reference to the Complaint).

The plaintiffs in the complaint describe themselves as:

> . . .children and youth in Montana, between the ages of two and 18 who have and will continue to be harmed by the dangerous impacts of fossil fuels…[who] are uniquely vulnerable to the consequences of the climate crisis, which harms [their] physical and psychological health and safety, interferes with family and cultural foundations and integrity and causes economic deprivations.

The lawsuit describes the "Climate Crisis" as ever increases CO2 greenhouse emissions into the atmosphere causing climate disruption including the heating up of the earth from which, "the harm from present day greenhouse gas (GHG) emissions will be disproportionately borne by today's children and future generations."

The complaint ascribes knowledge and culpability to the defendants because:

> . . .this scientific concept [or climate disruption from GHGs] has been well understood by [them] for decades. . . .[but] notwithstanding their longstanding knowledge of the dangers that climate disruption and GHG emissions pose, . . .Defendants have developed and implemented a State Energy Policy in Montana. . .which involves systemic authorization, permitting. . . and facilitation of activities promoting fossil fuels. . .without regard to climate change impacts. . . .

The Claims for Liability

In Count I, plaintiffs reference the "Right to Clean and Healthful Environment," and they look to the Montana Constitution for protection. They reference sections that guarantee 1) that "All persons are born free and have certain inalienable right including the right to a clean and healthful environment"; 2) the "State . . .shall maintain and improve a clean and healthful environment for the present and future generations," reference several other sections the Montana Constitution, and reference case law which interprets the state Constitution.

In Count II, plaintiffs seek the "Right to . . .Safety, Health and Happiness." Here again they rely upon sections of the state Constitution, including: that "no person shall be deprived of life, liberty, or property with due process."

In Count III, plaintiffs seek "Individual Dignity and Equal Protection" via the Montana Constitution including their right to "The dignity of the human being [as] inviolable."

In Count IV, plaintiffs seek the "Protection of Montana's Clean and Healthful Environment and Public Trust Resources. . ." Once again, the state's Constitution is referenced including their entitlement ". . as beneficiaries under the Public Trust Doctrine [as an] attribute of sovereignty that predate the . . Constitution."

Relief Sought

Under declaratory relief, plaintiffs basically seek recognition by the state court that the State of Montana's Energy Policy, codified under the Montana Code, be deemed in violation of the Constitution and public trust doctrine which have violated their rights and liberties. In terms of injunctive relief, they seek permanent enjoinment from "subjecting Youth Plaintiffs to the State's Energy Policy." They further seek the development of a remedial plan to "effectuate reductions in GHG emissions in Montana consistent with best available science . . . necessary to protect [their] rights."

Finally, they seek attorney's fees and costs of litigation and "such further or alternative relief as the Court deems just and equitable," opening the door to additional court orders and damage awards.

Conclusion and Implications

The lawsuit is novel and contains voluminous graphs, charts, and scientific studies demonstrating "climate disruptions." The issue will ultimately come down to whether they can also prove proximate cause to the state—an inquiry which will also require a showing of a duty owed them by the state. This will most certainly be a high bar to scale but the case remains at the fore of "youth" lawsuits and will be worth following as the case progresses.

The voluminous complaint is available online at: http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2020/20200313_docket-na_complaint.pdf
(Robert Schuster)

JUDICIAL DEVELOPMENTS

U.S. SUPREME COURT FINDS STATE LAW CLAIMS FOR OILFIELD CLEANUP RESTORATION PLAN MORE STRINGENT THAN A CERCLA PLAN MAY REQUIRE EPA APPROVAL

Atlantic Richfield Co. v. Christian et.al., ___U.S.___, 140 S.Ct. 1335 (April 20, 2020).

The U.S. Supreme Court determined that the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or the Act) did not strip Montana courts of jurisdiction over landowners' state law tort claims for restoration damages against Atlantic Richfield Company (ARCO). The Court, however, also determined the landowners were potentially responsible parties (PRPs) under CERCLA. As a result, the Act required the landowners to seek U.S. Environmental Protection Agency (EPA) approval for their desired restoration plan.

Factual and Procedural Background

For nearly a century, the Anaconda Copper Smelter in Butte, Montana contaminated an area of over 300 square miles with arsenic and lead. For 35 years, the EPA worked with the owner and defendant, Atlantic Richfield Company (ARCO) to implement a cleanup plan under the Act. To date, ARCO estimates that it has spent roughly $450 million to remediate more than 800 residential and commercial properties in accordance with the approved cleanup plan.

In 2008, a group of 98 landowners sued ARCO in Montana state court under common law tort claims of nuisance, trespass and strict liability, seeking restoration damages that went beyond EPA's cleanup plan. For example, the landowners sought a maximum soil contamination level of 15 parts per million of arsenic, rather than the 250 parts per million level set by EPA, to excavate soil within residential yards to a depth of two feet rather than EPA's chosen depth of one, and to capture and treat shallow groundwater, a plan EPA rejected as costly and unnecessary to secure safe drinking water. The estimated cost for the additional measures was $50 to $58 million.

ARCO argued that CERCLA stripped the Montana courts of jurisdiction over the landowners' state law claim for restoration damages. The Montana Supreme Court held that the landowners' plan was not a challenge to the EPAs cleanup plan because it, "would not stop, delay, or change the work EPA is doing." It reasoned the landowners were:

> . . .simply asking to be allowed to present their own plan to restore their own private property to a jury of twelve Montanans who will then assess the merits of that plan.

The Montana Supreme Court also held that the landowners were not PRPs prohibited from taking remedial action without EPA approval under § 122(e)(6) of the Act. It reasoned that the landowners were not Potential Responsible Parties because they had never been treated as PRPs for any purpose—by either the EPA or ARCO during the entire 30 years since the Copper Smelt was designated as a Superfund site, and that the six-year statute of limitations for a claim against the landowners had run.

Atlantic Richfield petitioned the U.S. Supreme Court for review.

The U.S. Supreme Court's Decision

Before the High Court was whether CERCLA stripped the Montana state courts of jurisdiction over the landowners' claim for more stringent restoration damages and, if not, whether the Act required the landowners to seek EPA approval of their restoration plan.

Jurisdictional Inquiry

The Court considered and rejected two arguments regarding jurisdiction. First, the Court rejected the landowners' argument that the Court lacked jurisdiction to review the Montana Supreme Court's decision.

The U.S. Supreme Court is authorized to review final judgments or decrees rendered by the high-

est court of a state. To qualify as final, a state court judgment must be an effective determination of the litigation and not merely an interlocutory or intermediate step. The landowners argued the Court lacked jurisdiction because the Montana Supreme Court's decision was a writ of supervisory control, which allowed the case to proceed to trial, but trial had not taken place. The U.S. Supreme Court rejected this argument, noting that Supreme Court precedent provides that a writ of supervisory control issued by the Montana Supreme Court is a final judgement within the Court's jurisdiction.

Second, the Court considered Atlantic Richfield's argument that CERCLA § 113 stripped Montana courts of jurisdiction over the landowners' lawsuit. Section 113(b) of the Act provides that U.S. District Courts have exclusive original jurisdiction over all controversies arising under the Act. The Court rejected this argument, explaining that this case does not "arise under" the Act as the term is used in CERCLA § 113(b). Instead, landowners' common law claims for nuisance, trespass and strict liability arose under Montana law. Thus, CERCLA did not deprive Montana state courts of jurisdiction over those claims.

EPA Approval

The U.S. Supreme Court next considered whether CERCLA required the landowners to seek EPA approval of their restoration plan. Section 122(e)(6) of the Act requires PRPs to obtain EPA approval of a restoration plan that is inconsistent with an approved plan. Section 107(a) of the Act lists four classes of PRPs.

The first category includes any "owner" of a "facility." "Facility" includes:

> . . .any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located.

The Court determined that arsenic and lead are hazardous substances, and that because they have come to be located on the landowners' properties, the landowners are PRPs. As a result, under § 122(e)(6), EPA must approve of the landowners' more stringent restoration plan.

The Opinions of Justices Alito, Gorsuch and Thomas

Justices Alito, Gorsuch, and Thomas concurred in part and dissented in part. Justice Alito concurred with the Court's majority holding that it has jurisdiction to decide the case and that the landowners are PRPs under § 122 (e)(6) of the Act. However, he was unwilling to join the Court's holding that state courts have jurisdiction to entertain "challenges" to EPA-approved plans under CERCLA.

Justices Gorsuch and Thomas concurred with the Court's holding that the Court has jurisdiction to decide the case, but dissented with the Court's holding that the landowners were PRPs under the Act.

Conclusion and Implications

The U.S. Supreme Court's decision introduces the possibility for property owners impacted by CERCLA Superfund sites to sue under common law state tort claims to implement a more stringent restoration plan than the plan approved by EPA. Further, the Court's interpretation of the Act makes it possible that the property owners could also PRPs, thereby requiring EPA approval prior to bringing such state law claims, if hazardous substances from a Superfund site have "come to be located" on their property. The High Court's opinion is available online at: https://www.supremecourt.gov/opinions/19pdf/17-1498_8mjp.pdf (Nathalie Camarena, Rebecca Andrews)

DISTRICT COURT FINDS NATIONWIDE PERMIT FOR KEYSTONE XL PIPELINE, AND OTHER PIPELINE AND UTILITY PROJECTS, VIOLATE THE ENDANGERED SPECIES ACT

Northern Plains Resource Council v. U.S. Army Corps of Engineers, ___F.Supp.3d___,Case No. CV-19-44-GF-BMM (D. Mt. Apr. 15, 2020, *amended* order May 11, 2020).

The U.S. District Court for the District of Montana recently declared that the U.S. Army Corps of Engineers (Corps) violated the federal Endangered Species Act (ESA) when it reissued Nationwide Permit 12 (NWP 12), a streamlined general permit used to approve the Keystone XL pipeline and other pipelines and utility projects pursuant to § 404(e) of the federal Clean Water Act. On April 15, 2020, the court determined the Corps did not properly evaluate NWP 12 under the ESA when it determined that reissuance of the permit would have no effect on listed species or critical habitat. Further, the Corps' decision not to initiate formal programmatic consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (the Services) in reissuing NWP 12 was also "arbitrary and capricious in violation of the Corps' obligations under the ESA." The court's order completely vacated the NWP 12 permit. In a subsequent order dated May 11, 2020, the court narrowed the *vacatur* to apply only to projects for the construction of new oil and gas pipelines, but not routine maintenance, inspection, and repair activities on existing projects. Thus, the court's order "prohibit[s] the Corps from relying on NWP 12 for those projects that likely pose the greatest threat to listed species."

Factual and Procedural Background

Plaintiffs include six environmental organizations that sued the Corps alleging violations of the Endangered Species Act, the National Environmental Policy Act (NEPA), and the federal Clean Water Act (CWA) following its reissuance of NWP 12 in 2017. The Corps issued NWP 12 for the first time in 1977.

Section 404 of the CWA requires any party seeking to construct a project that will discharge dredged or fill material into jurisdictional waters to obtain a permit. The Corps oversees the permitting process and issues both individual permits and general nationwide permits to streamline the process. The discharge may not result in the loss of greater than one-half acre of jurisdictional waters for each single and complete project. For linear projects like pipelines that cross waterbodies several times, each crossing represents a single and complete project. Projects that meet NWP 12's conditions may proceed without further interaction with the Corps.

Under § 7(a)(2) of the ESA, the Corps is required to ensure any action it authorizes, funds, or carries out, is not likely to jeopardize the continued existence of any listed species or destroy or adversely modify designated critical habitat. The Corps must determine "at the earliest possible time" whether its action "may affect" listed species and critical habitat. If the action "may affect" listed species or critical habitat, the Corps must initiate formal consultation with the Services. No consultation is required if the Corps determines that a proposed action is not likely to adversely affect any listed species or critical habitat. Formal consultation begins with the Corps' written request for consultation under ESA § 7(a)(2) and concludes with the Services' issuance of a Biological Opinion whether the Corps' action likely would jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

On January 6, 2017 the Corps published its final decision reissuing NWP 12 and other nationwide permits. The Corps determined that NWP 12 would result in "no more than minimal individual and cumulative adverse effects on the aquatic environment" under the CWA, and that NWP 12 complied with both the ESA and NEPA. The Corps did not consult with the Services based on its "no effect" determination, as the ESA does not require consultation if the proposed action is determined to not likely adversely affect any listed species or critical habitat.

Following the Corps' final decision, Plaintiffs challenged the Corps' determination not to initiate programmatic consultation with the Services under ESA § 7(a)(2) to obtain a Biological Opinion.

The District Court's Decision

The court considered plaintiffs' claim that the Corps acted arbitrarily and capriciously in reaching its "no effect" determination, and that the Corps should have initiated programmatic consultation with the Services when it reissued NWP 12. The court analyzed whether the Corps "considered the relevant factors and articulated a rational connection between the facts found and the choice made."

Reissuance of the Nationwide Permit Impacted Listed Species and Habitat

First, the court determined "resounding evidence" existed that the Corps' reissuance of NWP "may effect" listed species and their habitat. The court quoted statements by the Corps itself in its final determination documents acknowledging the many risks of authorized discharges by NWP 12. The Corps noted that activities authorized by past versions of NWP 12 "have resulted in direct and indirect impacts to wetlands, streams, and other aquatic resources" including "permanent losses of aquatic resource functions and services." Further, the Corps acknowledged that utility line construction "*will* fragment terrestrial and aquatic ecosystems" and that fill and excavation activities cause wetland degradation and losses. The court concluded that "[t]he types of discharges that NWP 12 authorizes 'may affect' listed species and critical habitat, as evidenced in the Corps' own Decision Document." Thus, under the ESA's low threshold for § 7(a)(2) consultation, "[t]he Corps should have initiated Section 7(a)(2) consultation before it reissued NWP 12 in 2017." The court also cited plaintiffs' expert declarations which demonstrated that reissuance of NWP 12 may affect endangered species, including pallid sturgeon populations in Nebraska and Montana, and the endangered American burying beetle. The declarations added to the "resounding evidence" in support of the conclusion that the Corps' actions "may affect" listed species or critical habitat.

Circumvention of the Consultation Process

Next, the court addressed the Corps' argument that it was authorized to circumvent § 7(a)(2) consultation requirements for programmatic consultation with the Services by relying on project-level review or General Condition 18, which provides that a nationwide permit does not authorize an activity that is "likely to directly or indirectly jeopardize the continued existence of a" listed species or that "will directly or indirectly destroy or adversely modify the critical habitat of such species." The court noted that a federal court previously concluded that the Corps should have consulted with the Services when it reissued NWP 12 in 2002. Further, the Corps had a history of consultation when it reissued NWP 12 in 2007 and 2012.

The court concluded that the Corps could not circumvent the consultation requirements of the ESA by relying on project-level review because "[p]rogrammatic review of NWP 12 in its entirety . . . provides the only way to avoid piecemeal destruction of species and habitat." By contrast, project-level review, "by itself, cannot ensure that the discharges authorized by NWP 12 will not jeopardize listed species or adversely modify critical habitat." Similarly, General Condition 18, "fails to ensure that the Corps fulfills *its* obligations under ESA Section 7(a)(2) because it delegates the Corps' initial effect determination to non-federal permittees." Thus, the Corps could not delegate its duty to determine whether NWP authorized activities will affect listed species or critical habitat.

Conclusion and Implications

In the end, the District Court concluded that the Corps' "no effect" determination and resulting decision to forego programmatic consultation "proves arbitrary and capricious in violation of the Corps' obligations under the ESA." The court vacated NWP 12 and enjoined the Corps from authorizing activities thereunder. In its amended order, the court limited the scope of its order to the construction of new oil and gas pipelines.

This case emphasizes the low threshold for § 7(a)(2) consultation for any activity that "may affect" listed species and critical habitat, and the need to comply with the ESA's procedural consultation requirements. The District Court's decision is available online at: https://ecf.mtd.uscourts.gov/doc1/11112687968
(Patrick Skahan, Rebecca Andrews)

CALIFORNIA COURT OF APPEAL UPHOLDS CEQA ENVIRONMENTAL IMPACT REPORT FOR OIL REFINERY PROJECT

Communities for a Better Environment v. South Coast Air Quality Management District, ___Cal.App.5th___, Case No. B293327 (2nd Dist. Apr. 2, 2020).

Plaintiff Communities for a Better Environment filed suit against the South Coast Air Quality Management District (SCAQMD), alleging that an Environmental Impact Report (EIR) for a change to the thermal operating limit of a heater in an oil refinery was inadequate under the California Environmental Quality Act (CEQA). Plaintiff attacked the EIR in four main respects, which the superior court rejected. Following an appeal by plaintiff, the Court of Appeal affirmed.

Factual and Procedural Background

Tesoro owns and operates two adjacent oil refining facilities in Carson and Wilmington, which date from the early 1900s. The project at issue in this case is referred to as the Los Angeles Refinery Integration and Compliance Project and would involve both facilities. As the name implies, the purpose of the project would be to improve the integration of the two facilities and to comply with air quality regulations.

The project itself would have three components. The first component would involve shutting down a major pollution source called the Wilmington Fluid Catalytic Cracking Unit. It also would install new pipelines and physically modify certain equipment. The second component would involve the installation of new storage tanks. Increased storage tank capacity would mean oil tankers could make fewer trips, which would decrease shipping costs and air pollution.

The third component, which is the portion of the project primarily attacked in plaintiff's lawsuit, would change the thermal operating limit of a heater that heats petroleum going into the "Wilmington Delayed Coker Unit." The particular heater has 36 burners, each of which has a maximum output of 8.4 million British thermal units (Btu) per hour. Thus, the maximum heat release for the heater as a whole is 302.4 million Btu per hour. This "maximum heat rate" is contrasted with the "guaranteed heat rate," which is the rate at which the heater's manufacturer guarantees the heater will operate. That rate is 7 million Btu per hour, for a total guaranteed heat rate of 252 million Btu per hour.

The difference in these rates is important because the heater previously had a federal air pollution permit keyed to a guaranteed rate of 252, even though Tesoro has operated the heater above this rate when it had to perform certain tasks. The third component of the project proposed rewriting the heater's permit in terms of the maximum rate of 302.4 instead of the guaranteed rate of 252 to align with standard industry and agency practice. This has three notable aspects: 1) the change would be on paper only—no physical changes to the heater would be made; 2) the agency simultaneously would impose a new permit limitation on air pollution from the heater to maintain levels that would be generated if the heater never operated above 252 Btu per hour; 3) by raising the thermal operating limit, the coker could potentially process a heavier blend of crude or could increase throughput through the coker by 6,000 barrels per day.

In connection with the permit approval process, SCAQMD prepared an EIR for the proposed project. Following approval of the permits and certification of the EIR in spring 2017, plaintiff brought suit in June 2017, alleging that the EIR was inadequate. The trial court rejected plaintiff's claims, and an appeal then followed.

The Court of Appeal's Decision

Baseline for Air Quality Analysis

The Court of Appeal first addressed plaintiff's claim that the baseline used to measure the project's impact on air pollution was too high. The project used a near-peak or 98th percentile method, that is, it was based on the refinery's worst air pollution emissions during a two-year interval before the project. This approach then excluded the top two percent of the data to rid the analysis of outliers, resulting in a 98th percentile method. The SCAQMD conducted its analysis by comparing these actual pre-project near-peak emissions with projected peak emissions

after the project, so as to measure and control the worst effects of air pollution. Based on this method, the agency concluded that the project would have the beneficial effect of reducing air pollution.

Rejecting plaintiff's claim that an average-value baseline should have been used, the Court of Appeal found that substantial evidence supported the agency's use of the 98th percentile baseline, which followed the practice of the federal Environmental Protection Agency, and that it was rational to care most about the worst effects of air pollution. In so doing, the Court of Appeal rejected various arguments by plaintiff regarding the decision to use the 98th percentile threshold, including claims that: 1) federal regulatory goals differed from state regulatory purposes; 2) the 98th percentile ignores existing environmental conditions; 3) whether the U.S. Environmental Protection Agency (EPA) uses a percentile approach is immaterial to what the agency should have done under state law; and 4) the "normal" baseline is based on average conditions. The Court of Appeal found all of these claims to lack merit.

Pre-Project Composition of Crude Oil

The Court of Appeal next addressed plaintiff's claim that the agency failed to obtain information about the pre-project composition of the crude oil the refinery processes, and instead only found that the crude oil input would remain within the refinery's "operating envelope." The court rejected this argument, finding that there was no need for the EIR to detail input crude oil composition, as that information was not material to assessing the project's environmental impact. The Court of Appeal further found that the EIR gave a stable and logical explanation of why the coker will not in fact process a heavier slate of crude following the project: it is constrained by upstream and downstream equipment that would require physical modification, and that physical modification will not occur.

Increase of Throughput by 6,000 Barrels Per Day

The Court of Appeal next addressed plaintiff's claim that, without knowing exactly how the agency figured that throughput through the coker could be increased by 6,000 barrels per day, CEQA's information purpose was undermined because those who did not engage in the administrative process could not understand and critique this calculation. In particular, the court found this argument to have been forfeited because the exact issue had not been presented to the agency during the administrative process. As such, it could not be presented for the first time in litigation.

Absence of Information Pertaining to Volumes of Crude Oil

Finally, the Court of Appeal addressed plaintiff's claim that the EIR failed to disclose two numbers: 1) the existing volume of crude oil the refinery processes as a whole; and 2) the refinery's unused capacity. The court rejected this claim, finding that these numbers were not material to the EIR's goal of evaluating the project's air pollution impacts. No law, the Court of Appeal further explained, requires a report to include unnecessary data. Cross-checks and verifications also are not needed if, as was the case here, substantial evidence supports the agency's analysis.

Conclusion and Implications

CEQA cases, in analysis by the court of the adequacy of an EIR can be fact intensive and highly technical in nature. This case was no different but is significant because it involves a substantive discussion of number of CEQA issues, including in particular an agency's determination of a baseline. The decision is available online at: https://www.courts.ca.gov/opinions/documents/B294732.PDF
(James Purvis)

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