

CALIFORNIA COASTAL COMMISSION

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W13.1a

DATE: November 30, 2023

TO: Commissioners and Interested Persons

FROM: South Central Coast District Staff

SUBJECT: Notice of Impending Development UCS-NOID-0002-23 (Baseball Stadium Turf) for Public Hearing and Commission Action at the December 13, 2022, Commission Meeting.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends that the Commission, after public hearing, approve the Notice of Impending Development (NOID) UCS-NOID-0002-23, as conditioned. Staff is recommending one (1) special condition for the subject NOID to assure consistency with the policies and provisions of the Long Range Development Plan (LRDP). The standard of review for the proposed NOID is consistency with the policies of the certified University of California Santa Barbara (UCSB) LRDP.

The impending development involves the conversion of an existing three-acre baseball field at Caesar Uyesaka Baseball Stadium on the Main Campus at the University of California at Santa Barbara, from natural turf (existing) to artificial turf (proposed). The proposed project would also include upgrades to on-site drainage systems, in-kind replacement of existing concrete dugouts, and project-associated grading (2,050 cu. yds. of cut, 400 cu. yds. of fill, and 400 cu. yds. of export). Best Management Practices (BMPs) for erosion control purposes during construction were included with the proposal.

The subject NOID was initially scheduled for review on the consent calendar at the September Commission hearing. Following public comment and Commission questions, the subject NOID was removed from the Consent Calendar pursuant to Section 13103 of the Commission's Regulations, allowing the University additional time to address concerns raised at the hearing in relation to the proposed project. The concerns warranting additional analysis relate to the potential impacts of the proposed artificial turf, including plastic degradation, microplastic migration, chemical leaching, water quality impacts, and project-related water demand and sustainability aspects, amongst others.

The proposed impending development involves the installation of three acres of impermeable plastic-based artificial turf field where a permeable natural turf field had existed before, and would require a switch from reclaimed water use at the existing field to potable water use at the proposed field. While the project does include improvements to onsite drainage, the NOID does not provide necessary analyses in relation to impact minimization for potential increases to runoff volume, flow rate, timing, and duration that could be caused by the increase in impervious surface area that the field would entail, and does not address ongoing regional drainage challenges that currently impact the subject site. Material testing for some but not all of the proposed field materials was provided, and the University did not provide requested analyses detailing artificial turf material degradation rates, anticipated microplastic transport rates, and anticipated efficacy of any microplastic retention strategies that would be employed.

Although water demand at the proposed artificial field was analyzed and confirmed to offer a significant reduction over the current field's water demand, the proposed field would utilize potable water instead of currently-used reclaimed water, due to the higher salt and mineral content present in reclaimed water. The LRDP prioritizes reclaimed water use for new development and requires a project-specific water availability analysis to be submitted for review with each NOID. At the time of publication of this staff report, this analysis had not been received by staff.

In order to ensure that impacts to water quality, water demand, and project sustainability are minimized through the proposed project, the Commission finds that the installation of artificial turf at the subject site cannot be considered the environmentally superior alternative, and **Special Condition One (1)** requires the University to submit a Final Revised Project Plan that shows the installation of natural turf – as opposed to artificial turf – on the baseball field at the subject site, including plans for grading, drainage, irrigation, and any additional site improvements required for the same.

Staff recommends that the Commission determine that the Notice of Impending Development is consistent with the certified LRDP only as conditioned with one special condition. The motion and resolution for Commission action can be found starting on **page 5**.

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EXHIBITS

Exhibit 1 – Vicinity Map

Exhibit 2 – Aerial Overview

Exhibit 3 – Proposed Project Plans

I. PROCEDURAL ISSUES

Section 30606 of the Coastal Act and Title 14, sections 13547 through 13550 of the California Code of Regulations¹ govern the Coastal Commission's review of specific development projects proposed to be undertaken pursuant to a certified Long Range Development Plan (LRDP). Section 13549(b) requires the Executive Director or his designee to review the notice of impending development (or development announcement) within ten working days of receipt and determine whether it provides sufficient information to determine if the proposed development is consistent with the certified LRDP. The notice is deemed filed when all necessary supporting information has been received. The items necessary to provide a complete notice of impending development for the project at issue in this report were received in the South Central Coast Office on June 28, 2023, and the notice was filed as complete on July 12, 2023.

Pursuant to section 13550(b) of the regulations, within thirty days of filing the notice of impending development (NOID), the Executive Director is to report to the Commission on the nature of the development and make a recommendation regarding the consistency of the proposed development with the certified LRDP. After a public hearing, by a majority of its members present, the Commission determines whether the development is consistent with the certified LRDP and whether conditions are required to bring the development into conformance with the LRDP. No construction shall commence until after the Commission votes to impose any conditions(s) necessary to render the proposed development consistent with the certified LRDP.

As mentioned above, the notice of impending development at issue in this case was filed complete on July 12, 2023. The Executive Director would normally need to report the pendency of the proposed development to the Commission by August 11, 2023. The University submitted a letter dated July 14, 2023, waiving the 30 day right to a Commission determination pursuant to Section 13550 (b) of the regulations to allow for additional time for staff review. The NOID was then reported at the September 2023 hearing, which was the next available meeting.

The notice of impending development was reported to the Commission on Friday, September 8, 2023, where it was included in the Consent Calendar. Pursuant to Section 13103 of the Commission's Regulations, where three or more Commissioners request that a NOID be scheduled for a public hearing on the LRDP calendar, the NOID in question shall be removed from the Consent Calendar. In such an instance, no additional timing constraints are associated with processing of the NOID in question. Following public comment and Commission questions, the subject NOID was pulled from the Consent Calendar pursuant to Section 13103 of the Commission's Regulations. Hearing on the item was continued until it could be agendized on the regular calendar.

¹ All further references to regulations are to Title 14 of the California Code of Regulations.

II. MOTION & RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission determine that the development described in the Notice of Impending Development UCS-NOID-0002-23 (Baseball Stadium Turf), as conditioned, is consistent with the certified University of California at Santa Barbara Long Range Development Plan.

Staff recommends a **YES** vote. Passage of this motion will result in a determination that the development described in the Notice of Impending Development UCS-NOID-0002-23, as conditioned, is consistent with the certified University of California at Santa Barbara Long Range Development Plan, and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby determines that the development described in the Notice of Impending Development UCS-NOID-0002-23, as conditioned, is consistent with the certified University of California at Santa Barbara Long Range Development Plan for the reasons discussed in the findings herein.

III. SPECIAL CONDITIONS

1. Final Revised Project Plans.

Prior to the authorization of the notice of impending development (NOID), the applicant shall submit, for the review and approval of the Executive Director, Final Revised Project Plans for the subject site. The revised plans shall include a detailed plan for the installation of natural turf – as opposed to artificial turf – at the subject site, including plans for grading, drainage, irrigation, and any additional site improvements required for the same. The plan shall consist of two full-size sets of project plans prepared by a qualified engineer and/or other qualified professional and shall include technical analyses addressing drainage, grading, and irrigation required for the proposed development. The plan shall include a description of best management practices (BMPs) to be employed during construction activities and shall include a narrative overview of the revised development. No elements of artificial turf shall be included in the Final Revised Project Plans.

The permittee shall undertake development in conformance with the approved Final Revised Project Plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a

Coastal Commission approved amendment to the notice of impending development, unless the Executive Director determines that no amendment is legally required.

IV. FINDINGS FOR APPROVAL OF NOTICE OF IMPENDING DEVELOPMENT

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION AND BACKGROUND

The University proposes to convert an existing three-acre baseball field at Caesar Uyesaka Baseball Stadium located on the University's Main Campus from natural turf (existing) to artificial turf (proposed) (**Exhibits 1-2**). The proposed project would also include upgrades to on-site drainage systems and in-kind replacement of existing concrete dugouts, along with associated grading (2,050 cu. yds. of cut, 400 cu. yds. of fill, and 400 cu. yds. of export). Trees located near the stadium would be protected in place and no trees would be removed as part of the project. The project would occur during the rainy season and would conclude in time for the University's baseball team spring training. Best Management Practices (BMPs) for erosion control purposes were included in the proposal and would be implemented to ensure that water quality is protected during construction. No changes are proposed to outdoor lighting.

Caesar Uyesaka Baseball Stadium was originally constructed in 1964. It exists within a larger recreational area on campus which includes a running track, tennis courts, lacrosse fields, and a softball field. The current baseball stadium is an enclosed, fenced area and is surrounded by paved areas to the north, east, and west, and the aforementioned recreational complex to the south. The stadium is not located within Open Space, ESHA, or ESHA Buffer. East Storke Wetland and Goleta Slough are located beyond developed areas to the north, approximately three quarters of a mile away. Stormwater accumulation at the existing field drains through the campus stormwater system to Goleta Slough to the north. Since its construction in 1964, the baseball field has undergone multiple improvements but has always remained a natural turf field. As the current field experiences damage from heavy use and drainage issues, field maintenance efforts are an ongoing effort at the existing field. The University proposes conversion of the existing natural turf field to an artificial turf field to reduce water usage, to reduce field maintenance efforts, and to increase year-round field availability for athletes.

The proposed artificial turf field would consist of a top layer of two-inch permeable synthetic turf, a layer of permeable "Proplay" pad, an impermeable liner, and below that four inches of crushed rock (**Exhibit 3**). The upper layer of artificial turf material would consist of polyethylene grass fibers woven into a fabric base layer. A combination of untreated sand and untreated woody "BrockFill" infill material would be laid on top of the turf material in order to keep the polyethylene grass fibers upright and provide additional field cushioning for athletes.

Onsite stormwater would be able to pass through the upper layers of the artificial turf field before hitting the impermeable fabric liner at its base. The mid-layer Proplay pad of the proposed artificial turf field would be permeable to water but would also function as a filter to prevent infill and grass fragments from passing through. Upon reaching the impermeable base layer of the proposed field, stormwater would be directed towards a drainage system proposed at the field perimeter. The proposed drainage system would consist of a channel of crushed rock surrounded by impermeable lining, with perforated stormwater collection piping at the base. Stormwater from the field would pass through the piping and be conveyed from the field into two existing catch basins located near the field. From there, stormwater would pass through the existing campus storm drain system before depositing in Goleta Slough to the north.

While the existing natural turf field utilizes reclaimed water for irrigation, the proposed artificial turf field would not require irrigation. Further, the use of reclaimed water for any purpose within the proposed field would not occur due to the higher salt and mineral content present in reclaimed water. As such, all reclaimed water lines present within the existing field would be capped and abandoned in place (**Exhibit 3**). A field water supply box and valve would be inserted at the pitcher's mound and dugout area for occasional spot cleaning with potable water. Full-field washdowns would not occur at the proposed field. Where the existing field requires approximately 45,000 gallons of water per year (reclaimed water), the proposed artificial turf field would require approximately 12,000 gallons of water per year (potable water). There would be no cleaning, conditioning, or sanitizing of the artificial turf field and flame retardants would not be used on the field (which is not flammable).

As a previously disturbed area and given the shallow nature of proposed grading, the proposed project is not expected to adversely impact archeological resources and an archaeological monitor is not proposed. However, per the Commission's Tribal Consultation Policy, staff has contacted representatives from Native American Tribes understood to have current and/or historic connections to the project area. At the time of publication of this staff report, no questions or concerns have been brought to the attention of Commission staff by representatives of the Tribes that were contacted.

The subject NOID was initially reported to the Commission on Friday, September 8, 2023, where it was included in the Consent Calendar. Following public comment and Commission questions, the subject NOID was removed from the Consent Calendar pursuant to Section 13103 of the Commission's Regulations, allowing the University additional time to address concerns raised at the hearing in relation to the proposed project. This staff report analyzes the currently-proposed project inclusive of any project revisions made to the proposal since the September hearing.

Turf Field Removal

On September 14, 2023, a complaint regarding the subject site was received by Commission Enforcement staff, indicating that certain aspects of the proposed project had already begun. Staff contacted the University, who confirmed on September 20, 2023 that removal of natural turf at the baseball stadium had been performed in advance of the NOID approval, but that best management practices had been in place during the work. Staff instructed the University to cease further work on site until approval of the subject NOID, and the University agreed.

B. CONSISTENCY ANALYSIS

The standard of review for a Notice of Impending Development is consistency with the certified UCSB Long Range Development Plan (LRDP). The 2010 LRDP was certified by the Commission in 2014 and contains policies and provisions that identify areas for campus development while protecting coastal resources including water quality and sustainability.

Section 3.9 of the LRDP states:

A Water Quality and Hydrology Plan (WQHP) shall be required for “Developments of Water Quality Concern” (DWQC, as specified in Section 3.9.1, below), which are specified categories of development have a greater potential for adverse water quality and runoff impacts due to the development size, type of land use, or proximity to coastal waters. The WQHP shall be prepared by a qualified licensed professional, and shall include a polluted runoff and hydrologic site characterization, a sizing standard for BMPs, use of an LID approach to retain runoff on-site, and documentation of the expected effectiveness of the proposed BMPs. Additional plan components that may be required include an alternatives analysis, and a description of the Treatment Control and/or Runoff Control BMPs the development will implement to minimize potential post-development water quality and hydrology impacts.

Section 3.9.1 of the LRDP, in relevant part, states:

Applicability of Water Quality and Hydrology Plan. A WQHP shall be required for a Development of Water Quality Concern that requires a Notice of Impending Development and has the potential for adverse water quality or hydrology impacts to coastal waters, including projects that (1) entail construction (as defined above), or (2) entail changes in land use. Developments of Water Quality Concern shall include the following:

...

c. 75% or more of site will be impervious surface area. Development where 75% or more of the site’s surface area will be impervious surfaces.

d. Create and/or replace 10,000 square feet or more impervious surface area. Development that creates and/or replaces a cumulative site total of 10,000 square feet or more of impervious surface area.

Section 3.9.2 of the LRDP states:

Submittal of Water Quality and Hydrology Plan. A preliminary Water Quality and Hydrology Plan (WQHP), based on site conditions and project features known at the time of submittal, shall be submitted with the Notice of Impending Development, and a final WQHP shall be submitted for approval by the Executive Director of the Coastal Commission prior to issuance of a NOID. Any changes to the final WQHP after issuance of the NOID shall be subject to additional authorization by the Coastal Commission.

Policy WQ-01 states:

New development shall be sited, designed, and managed to prevent adverse impacts from stormwater or dry weather runoff to coastal waters and environmentally sensitive habitat areas. Sources of inflow to coastal wetlands shall be maintained so that the quality, volume and duration of flows do not diminish wetland hydrology.

Policy WQ-02, in relevant part, states:

...

B. Development shall be sited and designed consistent with the following runoff control priorities, and implemented through the water quality protection plans in compliance with Appendix 3 (Water Quality Protection Program):

1. First, where drainage from campus lands may directly or indirectly flow into coastal waters, the first priority for the plans and designs of proposed campus development shall be the prevention of an increase in post-construction stormwater runoff volume or velocity compared with existing site conditions.
2. Second, where despite the inclusion of all feasible measures to achieve the first priority an increase in site runoff cannot be fully avoided, the project plans and designs shall include all feasible additional drainage management measures necessary to slow, capture, treat, infiltrate, and detain stormwater runoff on site to the maximum extent feasible, and in the manner that best protects coastal resources, including wetlands, environmentally sensitive habitat areas, and coastal waters.

Policy WQ-04 states:

Campus site development is to be accomplished, whenever feasible, in a manner that will maximize percolation and infiltration of precipitation into the ground. The

University shall site, design, construct and manage development to maintain or enhance where appropriate, on-site infiltration. Where inadequate infiltration would increase site runoff, development shall be scaled to ensure that on-site detention capacity (such as storage ponds or vaults) is increased sufficiently to avoid increased offsite discharge volume or velocity to the maximum extent feasible. Increased surface runoff shall not be conveyed over bluffs, including through sheet flow, open channels, or outfalls.

Policy WQ-05 states:

The University shall site, design, construct and manage development to preserve or enhance vegetation that provides water quality benefits such as transpiration, vegetative interception, pollutant uptake, shading of waterways, and erosion control. Native vegetation shall be prioritized for use in water-quality treatment facilities such as bioswales and vegetated filter strips. Removal of existing vegetation on campus shall be minimized and limited to a pre-approved area required for construction operations. The construction area shall be fenced to define project boundaries. When vegetation must be removed, the method shall be one that will minimize the erosive effects from the removal. Temporary mulching or other suitable interim stabilization measures shall be used to protect exposed areas during construction or other land disturbance activities.

Policy WQ-06, in relevant part, states:

The University shall design, construct and manage campus development to minimize the introduction of pollutants, including trash and sediment, into coastal waters. Pollutants shall not be allowed to enter coastal waters through drainage systems. Low Impact Development (LID) strategies shall be used to emphasize an integrated system of decentralized, small-scale control measures that minimize alteration of the site's natural hydrologic conditions through infiltration, evapotranspiration, filtration, detention, and retention of runoff close to its source. Traps and filters for roadway contaminants shall be provided as part of all drainage structures.

Policy WQ-07 states:

New development shall be designed to minimize the extent of new impervious surface area, especially directly-connected impervious surfaces, and where feasible to increase the area of pervious surfaces, to reduce runoff.

Policy WQ-08 states:

If implementing site design, source control, and LID strategies are not sufficient to minimize:

- A. Pollutants in runoff from development and in turn protect coastal waters, use treatment control BMPs sized for the appropriate design storm to remove pollutants; and
- B. Adverse post-development changes in runoff volume, flow rate, timing, and duration, use runoff controls sized for the appropriate design storm, to protect coastal waters, habitat, and property.

Policy PS-03 states:

For development that requires a water supply, at the time of NOID submittal the University shall provide sufficient water conservation, efficiency, and supply management strategies to factually support a projection of adequate permanent future supplies for the life of the entire development. To minimize impacts to the long-term water supply, each new development shall off set the development's anticipated potable water use in accordance with the following hierarchy. Notwithstanding the availability of GWD water supplies, the following water conservation measures shall be implemented to the maximum extent feasible, except as required pursuant to Policy PS-07, prior to reliance on GWD's potable water supply:

- A. Maximum feasible incorporation into the proposed project plans of water conservation and efficiency measures, and reclaimed water use measures.
- B. Increased campus water conservation and efficiency measures, and increased campus reclaimed water use to reduce campus potable consumption, such as for irrigation, use in toilets, and in industrial applications.
- C. Further development enhanced reclaimed water systems on campus to utilize reclaimed water for industrial applications such as cooling towers to reduce potable consumption.
- D. New uses of reclaimed water on campus as technology and systems become available.

Policy PS-04 states:

A project-specific water availability analysis shall be provided for each proposed development that requires water input and shall be submitted with the Notice of Impending Development. At the time a new campus building is proposed, and before environmental review is complete, the University shall meet with GWD and ascertain that permanent potable water supplies of the quantity needed to serve the proposed development are available from the District as part of the water availability analysis. The water availability analysis shall include but not be limited to the following information:

- (1) a description of cumulative campus development (existing and approved);
- (2) cumulative water use (for existing and approved development), including use by University-owned facilities occupied or operated by third parties (such as food service or other vendors, affiliated or independent research programs and institutes, summer programs and camps using University-owned facilities, etc.) and outdoor recreational facilities, landscaping, habitat restoration sites (such as Ocean Meadows), open space and habitat management, and the Coal Oil Point Reserve;
- (3) an estimate of the remaining quantity of water supply available to the University within the University's 945 AFY planning threshold (which, depending on development location, would be served by a portion of one of the University's three existing allotments from Goleta Water District, including the 945 AFY available campus-wide, the 200 AFY available at North Campus, and the 66 AFY available at Devereux School) establishing the maximum amount of potable water needed to fully serve the 2010 LRDP build-out;
- (4) the estimated quantity of potable water necessary to serve the proposed development;
- (5) an analysis of year-to-year compliance with campus conservation goals articulated in the 2013 Campus Water Action Plan approved by the Regents of the University of California, and as updated by the Regents from time to time;
- (6) a cumulative regional assessment of water supply and demand within the Goleta Water District's (GWD) boundaries. This assessment shall include a narrative of any changes to GWD's cumulative water supply and demand setting. UCSB shall install additional water meters at existing development where feasible and necessary to generate sufficient data to prepare the annual report and to document compliance with conservation goals. All new development shall include water meters and sub-meters where practicable.

Policy SUST-02 states:

- A. The University shall reduce greenhouse gas emissions and the use of non-renewable resources by complying with the campus-wide sustainability programs.
- B. All Notice of Impending Development submittals shall be supported by an evaluation of the project's consistency with the campus-wide sustainability programs, including but not limited to measures pertaining to:
 - Green Building;
 - Clean Energy;

- Transportation;
- Climate Protection;
- Sustainable Operations;
- Waste Reduction and Recycling;
- Environmentally Preferable Purchasing;
- Sustainable Foodservice;
- Water Conservation

The proposed notice of impending development involves the replacement of an existing natural turf athletic field with an artificial turf athletic field. While similar projects have been permitted through past Commission action – both at the University and other locations in the Coastal Zone – the understanding of the potential impacts of artificial turf use upon resources protected by the Coastal Act has been evolving and is an active field of scientific study. As such, the consistency of the proposed project should be analyzed using the best available science to clearly demonstrate environmental superiority over any feasible project alternatives, and should not rely upon past Commission action alone. In response to concerns raised during the September 2023 Commission hearing, the University provided additional information to demonstrate the environmental superiority of the proposed project over alternative project designs which would continue the use of natural turf at the baseball stadium.

While artificial turf may present some advantages over natural turf, the use of artificial turf materials has been linked to numerous environmental and health concerns. As a plastic-based alternative to natural turf, artificial turf raises issues of plastic degradation, offsite transport of microplastics, and increased burden to plastic-saturated waste streams. As opposed to other sources of microplastic pollution, grass fibers from artificial turf fields are subject to harsh weathering conditions through frequent mechanical abrasion and extensive UV exposure. Where artificial turf fields are located adjacent to coastal waterways, coastal and nearshore waters are presumed to be a temporal reservoir for artificial turf fibers due to offsite migration (De Haan et al., 2023). Unlike natural turf fields, artificial turf is often supported by an impermeable base layer, requiring thoughtfully engineered stormwater conveyance systems to account for local changes to soil infiltration, runoff rates and volumes, and related water quality impacts. Without the irrigation required to support natural turf fields, artificial turf fields offer reduced water demand. However, without the benefit of evaporative heat loss, artificial turf fields are more likely to heat to elevated temperatures. To mitigate this issue, athletic fields composed of artificial turf may at times require water for cooling purposes, and potable water – as opposed to reclaimed water – may be preferred due to its reduced salt and mineral content. As a manufactured product with some degree of

inevitable off-gassing, it is possible that artificial turf fields hold higher global warming potential than natural turf fields. On this issue, however, comparative analyses of global warming potential between natural turf and artificial turf fields are difficult to obtain, requiring site-specific analyses subject to professionally-determined research parameters. As a whole, scientific support for the relative strengths of artificial turf over natural turf is generally difficult to obtain, and a growing body of evidence suggests that natural turf may, in certain situations, remain the least environmentally damaging alternative.

At the time of publication of this staff report, the University had sufficiently addressed some of these concerns in relation to the proposed project, but did not provide adequate analysis for others.

Water Quality

Following public comment and Commission questions at the September 2023 hearing, the concerns raised through the hearing were communicated to the University. Of these, several concerns centered upon potential water quality impacts of the proposed project. The proposed notice of impending development involves the replacement of three acres of existing permeable natural turf with three acres of plastic-based impermeable artificial turf, and includes upgrades to on-site drainage systems.

Despite proposed improvements to onsite drainage, the proposed project fails to account for the significant increase in impervious surface that would be created by the proposed project. The existing field is composed of natural turf which, according to a 1990 K-C Geotechnical Associates geotechnical report submitted by the University, is situated atop fifteen feet of surficial soil and terrace deposits that crown a layer of underlying bedrock. Geotechnical surveys of adjacent sites describe the surficial and terrace layers as water-permeable, indicating that the subject site should be no different. The proposed artificial turf field would be entirely impervious, with a layer of waterproof material preventing on-site stormwater from percolating through the field and into the substrata below. Policy WQ-07 of the LRDP requires that new development shall be designed to minimize the extent of new impervious surface area, while additional policies require development to minimize increases in stormwater runoff volume (Policy WQ-02) and flow rate (Policy WQ-08). As the proposed drainage system is a conveyance system only, it does not provide runoff controls to minimize adverse post-development changes in runoff volume, flow rate, timing, and duration. Further, the NOID does not account for the reduction in on-site soil infiltration that would result from the proposed development and does not address whether adverse changes in runoff flows would be expected from this project. Given the amount of impervious surface area that would be created by the proposed project, the project would qualify as a “Development of Water Quality Concern” as defined in Section 3.9 of the LRDP, and would therefore require the submission of a Water Quality and Hydrology Plan (WQHP), per LRDP specifications, for approval by the Executive Director. At the time of publication of this staff report, staff had not received a WQHP.

Additionally, while the NOID proposes the current project design in part to improve site drainage by facilitating the accelerated removal of stormwater collected on the field, it is worth noting that a considerable portion of onsite drainage issues originate outside of the current field. According to a 2022 draft hydrology report prepared by Geosyntec and submitted by the University, stormwater runoff from the UCSB Sports Fields area flows northwest via surface flow and within the storm drain network to the detention basin shared by the baseball field and other nearby sites. However, due to insufficient sizing and placement of existing storm drain inlets between the lacrosse and softball field area and the baseball stadium area, larger storm events result in flooding of the lacrosse and softball fields with the runoff ultimately flowing into the baseball stadium, in a flow path directed into the baseball locker room. As the proposed project does not address drainage issues within this larger context, it is unclear whether the proposed project would resolve ongoing onsite drainage challenges as promoted.

According to the NOID, post-construction stormwater at the subject site would continue to be routed through site-adjacent catch basins before being conveyed via the existing campus storm drain system into Goleta Slough to the north. Given this connection to a sensitive natural area and the potential for impacts to coastal resources, there are additional water quality concerns regarding project impacts that could occur through microplastic pollution, plastic leaching, and conveyance of potential turf treatment compounds into local waterways. In response to specific concerns, the University confirmed that there would be no cleaning, conditioning, or sanitizing of the artificial turf field and that flame retardants would not be used on the field (which is not flammable). Material testing and specifications provided by the University confirmed that neither the proposed turf nor the proposed fill would contain hazardous PFAS compounds often associated with artificial turf fields, and confirmed that the proposed untreated woody fill material ("BrockFill") would present no additional concerns in relation to chemical composition. However, the University has not provided a complete analysis of chemical composition and leaching potential for other field components (grass, carpet backing, shockpad, etc.), and has not provided requested analyses detailing artificial turf material degradation rates, anticipated microplastic transport rates, or anticipated efficacy of any microplastic retention strategies that would be employed.

Therefore, consistent with cited policies of the LRDP above, the Commission finds that the installation of artificial turf at the subject site cannot be considered the environmentally superior alternative. In order to ensure that impacts to water quality are minimized through the proposed project, the Commission finds it necessary to require the development to not include the installation of any artificial turf. **Special Condition One (1)** requires the University to submit Final Revised Project Plans proposing the installation of natural turf – as opposed to artificial turf – at the subject site and addressing any additional site improvements required for the same.

Water Demand and Sustainability

The proposed notice of impending development includes the installation of three acres of plastic-based artificial turf where none has existed before, and the proposed field

would require the use of potable water where reclaimed water has been used before. Concerns raised through the hearing were communicated to the University in relation both to water demands and end of life disposal for the proposed field.

Because the proposed artificial turf field would not require irrigation, would not utilize full-field washdowns, and would use water only for occasional spot cleaning, the proposed project would result in a significant reduction in onsite water use. However, where the existing field currently requires approximately 45,000 gallons of reclaimed water per year for irrigation, the proposed artificial turf field would still require approximately 12,000 gallons of water per year. Additionally, the proposed field would utilize potable water instead of currently-used reclaimed water, due to the higher salt and mineral content present in reclaimed water. Policy PS-03 of the LRDP requires maximum feasible incorporation of reclaimed water use measures in project plans, and Policy PS-04 requires that a project-specific water availability analysis, per LRDP specifications, shall be provided for proposed developments that require water input and shall be submitted with the Notice of Impending Development. At the time of publication of this staff report, a project-specific water availability analysis has not been received by staff.

According to the University, the proposed artificial turf field has an estimated lifetime of ten years. Policy SUST-02 states that all NOID submittals shall be supported by an evaluation of the project's consistency with the campus-wide sustainability programs, including those related to waste reduction and recycling. In response to concerns regarding end-of-life disposal and recyclability potential, the University did not provide confirmation of local or regional recycling locations accepting artificial turf waste and did not provide estimation of the total amount of plastic waste that would be generated by the end of the field's estimated lifetime.

Therefore, consistent with cited policies of the LRDP above, and in order to ensure that impacts to water demand and sustainability are minimized through the proposed project, the Commission finds that the installation of artificial turf at the subject site cannot be considered the environmentally superior alternative. In order to ensure the consistency of the proposed project with the cited sustainability policies, the Commission finds it necessary to exclude the installation of any artificial turf. **Special Condition One (1)** requires the University to submit Final Revised Project Plans that include the installation of natural turf – as opposed to artificial turf – at the subject site and addressing any additional site improvements required for the same.

For the reasons described above, the Commission finds that the Notice of Impending Development, only as conditioned, is consistent with the applicable LRDP policies with regards to coastal resources including water quality and sustainability.

C. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's administrative regulations requires the Commission to make a specific finding that a permit application is consistent with any applicable

requirements of the California Environmental Quality Act (CEQA). This requirement also applies to the Commission's review of NOIDs, based on Section 13550(d) of the regulations. Pursuant to CEQA, the University of California is responsible for preparing any necessary environmental documents for its project (Pub. Res. Code § 21080.09). When carrying out its review as a responsible agency, the Commission has a certified regulatory program that it generally uses in lieu of preparing environmental impact reports and negative declarations under CEQA.

Section 21080.5(d)(2)(A) of CEQA prohibits the Commission from approving a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse effect which the activity may have on the environment. For the reasons discussed in this report, the Commission has conditioned the NOID to require design and implementation of Final Revised Project Plans that do not include the installation of artificial turf. The project, as conditioned, is consistent with the governing Long Range Development Plan (LRDP) and its coastal zone protection policies and all significant environmental impacts of the proposed development are avoided or mitigated to the extent feasible. As conditioned, the proposed project does not have any remaining significant effects within the meaning of CEQA.

The Commission incorporates its findings on LRDP consistency at this point as if set forth in full. As discussed in the preceding sections, the proposed development approved by this NOID, as conditioned, is consistent with both the policies and provisions of the certified 2010 LRDP. Feasible mitigation measures that will minimize all significant adverse environmental impacts have been required as special conditions. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, that would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the impending development, as conditioned herein, is consistent with the applicable policies and provisions of the certified LRDP, the Coastal Act, and CEQA.

APPENDIX A

Substantive File Documents

University of California, Santa Barbara, 2010 Long Range Development Plan; September 8, 2023 Commission Hearing Item F5a and Associated Public Comment; UCSB NOID 6-10 (Robertson Field Turf Expansion); CDP Application No. A-2-SNF-12-020 (San Francisco Beach Chalet); CDP Appeal No. A-6-ENC-16-0054 (City of Encinitas); de Haan, W. P., Quintana, R., Vilas, C., Cózar, A., Canals, M., Uviedo, O., & Sanchez-Vidal, A. (2023). The dark side of artificial greening: Plastic turfs as widespread pollutants of aquatic environments. *Environmental Pollution*, 334, 122094. <https://doi.org/10.1016/j.envpol.2023.122094>