UTAH INLAND PORT AUTHORITY

Moving Utah Forward

NATURAL RESOURCES

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Policy Owner:	Mona Smith	**Approved By:**	

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Table of Contents

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Revision Table

Version	Effective Date	Revision Author	Summary of Revisions
2.0	December 11, 2024	Mona Smith	Updated the definition of the term Wetlands; Removed the Utah Department of Environmental Quality Wetlands Program section; Added Utah Standards of Quality for Waters of the State and Utah Division of Water Quality Wetland Program Development sections; Updated how wetlands are defined in Wetland Mitigation in UIPA Project Areas section; Revised language in Wetland Mitigation in UIPA Project Areas section to reflect that wetland mitigation monies must be spent on eligible activities outside of what is required by Federal and State regulations; Updated wetland mitigation project prioritization criteria
3.0	Pending	Ben Hart & Mona Smith	Updated policy name from Wetlands to Natural Resources; Added Dark Skies & Water Conservation sections

BP-17 NATURAL RESOURCES

I. Purpose Statement

The policy adopted by the Utah Inland Port Authority (UIPA) to maintain regulatory compliance for wetlands present in UIPA project areas.

II. Regulatory / Legislative Requirements

- Clean Water Act Section 404
- Food Security Act of 1985

III. Scope

This policy provides employees of UIPA an understanding of the responsibilities and obligations pertaining to impacted wetlands within UIPA project areas.

IV. References

- Code of Federal Regulations - Part 230: Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material
- The Environmental Law Institute & Land Trust Alliance Funded by the U.S. Environmental Protection Agency: Wetland and Stream Mitigation
- H.B. 118: Wetland Amendments
- H.B. 410: Great Salt Lake Watershed Enhancement
- NWQ Project Area Plan Appendix B Interlocal Agreement between Salt Lake City Corporation, Redevelopment Agency of Salt Lake City and the Utah Inland Port Authority
- R317: Environmental Quality, Water Quality
- United States Army Corps of Engineers: In-Lieu Fee Programs
- United States Department of Agriculture: Provision of the Food Security Act of 1985
- United States Department of Agriculture: Wetland Mitigation
- United States Fish & Wildlife Service: National Wetlands Inventory
- Utah Department of Environmental Quality Division of Water Quality: Project Summary for Wetland Program Development Grant FY2016-17 CD-96852601

- Utah Department of Environmental Quality Division of Water Quality: Wetlands Program
- Utah Geological Survey: Groundwater & Wetland News: In-Lieu Wetland Mitigation–A Boring Name for an Exciting Idea
- Utah Geological Survey: Improving Great Salt Lake Wetland Quality Through Monitoring of Wetland Uses, Water Quality, and Condition
- Utah Geological Survey: Survey Notes: Is There a Wetland on Your Property?
- Utah Geological Survey: Utah Rapid Assessment Procedure
- Utah Geospatial Resource Center: Wetlands and Riparian Data
- Utah's Wetland Program Plan 2018-2023

V. Definitions

Term	Definition
Artificial Light at Night (ALAN)	Any outdoor light produced by human technology rather than a naturally occurring process.
BUG Rating	A fixture classification system measuring Backlight (B), Uplight (U), and Glare (G) on a scale of 0–5. Lower numbers indicate better performance. Required for all fixtures under these standards.
Color Temperature (CTT)	Measured in Kelvin (K). Lower values (e.g., 2700K, 3000K) produce warm, amber-toned light with less blue spectrum. Higher values (4000K+) produce cool, blue-rich white light with greater sky glow and biological impact.
Compensatory Mitigation	The restoration (re-establishment or rehabilitation), establishment (creation), and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.
Credits	A unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.
Debits	A unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic functions at an

Term	Definition
	impact or project site. The measure of aquatic functions is based on the resources impacted by the authorized activity.
Discharge of Dredged or Fill Material	Any addition of dredged or fill material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States.
Dredged Material	Material that is excavated or dredged from waters of the United States
Enhancement	The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s)
Establishment (Creation)	The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site
Fill Material	Material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States. Examples of such fill material include, but are not limited to: rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.
Full Cuttoff / Fully Shielded	A fixture in which no light is emitted above 80 degrees from nadir (straight down) in its final installed position. This standard is more stringent than the conventional 90-degree cutoff and accounts for fixture tilt in installation. All useful light is directed downward toward the intended target area.
Hydric Soil	Soil, which is permanently or seasonally saturated by water, resulting in anaerobic conditions, as found in wetlands

Term	Definition
Hydrophytic Vegetation	Plants which have adapted to growing in the low-oxygen (anaerobic) conditions associated with prolonged saturation or flooding
Light Trespass	Light falling outside the property boundary of the source, onto neighboring residential properties, natural lands, or public rights-of-way.
Lumen	The unit of luminous flux; a measure of total light output from a fixture. Not to be confused with wattage (power consumed).
Lux	A unit of illuminance. 1 lux = 1 lumen per square meter. Approximately 0.093 foot-candles.
Non-Operational Setting	The reduced lighting output level required when a zone is not in active use. Dim levels vary by zone type. Transitions to and from this setting are triggered by verified activity, not time of day, except where a time-based floor is expressly required in Section 4.
Operational Setting	The full lighting output level permitted when workers, vehicles, or loading activity are actively present and engaged in operational tasks within a specific zone.
Preservation	The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms
Re-Establishment	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource
Rehabilitation	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource
Restoration	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purposes of tracking net gains in aquatic resource area,

Term	Definition
	restoration is divided into two categories: re-establishment and rehabilitation
Significantly affect	A material influence on the chemical, physical, or biological integrity of waters of the United States
Sky Glow	The diffuse brightening of the night sky above a developed area, caused by upward-directed and scattered artificial light.
Uplighting	Any fixture configuration that emits light above 80 degrees from nadir in its final installed position.
Waters of the State of Utah	All streams, lakes, ponds, marshes, water-courses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof, except that bodies of water confined to and retained within the limits of private property, and which do not develop into or constitute a nuisance, or a public health hazard, or a menace to fish and wildlife, shall not be considered to be "waters of the state" under this definition.
Waters of the United States	(1) Waters which are: (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (ii) The territorial seas; or (iii) Interstate waters, including interstate wetlands; (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under section (5); (3) Tributaries of waters identified in section (1) or (2):

Term	Definition
	(i) That are relatively permanent, standing or continuously flowing bodies of water; or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in section (1); (4) Wetlands adjacent to the following waters: (i) Waters identified in section (1); or (ii) Relatively permanent, standing or continuously flowing bodies of water identified in sections (2) or (3)(i) and with a continuous surface connection to those waters; or (iii) Waters identified in sections (2) or (3) when the wetlands either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in section (1); (5) Intrastate lakes and ponds, streams, or wetlands not identified in sections (1) through (4): (i) That are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in sections (1) or (3)(i); or (ii) That either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of waters identified in section (1)
Wetlands	Per Part 230 of Title 40 Chapter I Subchapter H of the Federal Code of Regulations Section 404(b)(1) Guideline for Specification of Disposal Sites for Dredged or Fill Material enacted by the Clean Water Act, "Wetlands consist of areas that are inundated or saturated by surface or ground water at a frequency and

Term	Definition
	duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." According to the Utah Geological Survey, "A wetland is land that is flooded or has a high water table during the growing season on a permanent or seasonal basis." Wetlands generally include swamps, marsh, bogs and similar areas. In the intermountain west, wetlands typically consist of fresh and saltwater marsh, wet meadows, playas, and mudflats.

VI. Roles & Responsibilities

Role	Responsibility
Environmental & Sustainability Director	Act as a subject matter expert to inform impacted parties of roles and responsibilities for wetland regulatory compliance.
Executive Director	Administer policy and adopt procedures.

VII. Policy

The Utah Inland Port Authority recognizes the importance of wetlands within the State of Utah and Project Areas and the regulatory compliance and mitigation requirements. This policy allows for incentives that may be granted to UIPA project areas that have received board approval.

VIII. Wetlands

Wetland Regulations

Wetland Conversion for Agricultural Production

Wetland Conservation provisions, introduced in the 1985 Farm Bill as the Food Security Act, are meant to discourage conversion of wetlands to produce agricultural commodities. The Act states people who convert wetlands after December 23, 1985, for the purpose of making production of agricultural commodities possible, will be ineligible for certain U.S. Department of Agriculture (USDA) benefits until the functions of the converted wetlands are mitigated or restored. Producers who alter wetlands must mitigate or replace the lost functions, values, and acres to restore their eligibility for certain USDA programs. Functions and values are replaced through restoration or enhancement of manipulated or degraded wetlands. Mitigation plans must be approved by the Natural Resources Conservation Service (NRCS).

Mitigation is required when a landowner wants to conduct activities that alter wetlands to make the production of an agricultural commodity possible. Conversion activities may include:

- Filling
- Altering the surface or subsurface drainage from the December 23, 1985, condition
- Land leveling
- Clearing woody vegetation and removing the stumps
- Diverting run-off water from a wetland

Mitigation requires the replacement of all lost functions, values, and acres. With differing functions, the most effective method is replacing wetlands type for type, such as depressional wetland for depressional wetland or forested wetland for forested wetland.

To be in compliance with the highly erodible land conservation and wetland conservation provisions, producers must agree, by certifying on Form AD1026 (Highly Erodible Land Conservation and Wetland Conservation Certification), that they will not:

- Produce an agricultural commodity on highly erodible land without a conservation system;
- Plant an agricultural commodity on a converted wetland;
- Convert a wetland to make possible the production of an agricultural commodity.
- It is always best to have a conversation with your local NRCS office to discuss details of wetland mitigation. You may wish to have NRCS certify wetlands by signing form AD-1026 at the Farm Service Agency (FSA) office. NRCS will then determine if there are wetlands subject to the provisions.

Section 404 of the Clean Water Act

In 1972, Congress passed amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), establishing a new section of the act and a new regulatory program. This new section, Section 404, requires landowners to secure a permit from the U.S. Army Corps of Engineers (the Army Corps) for activities that would lead to a "discharge of dredged or fill material" into "waters of the United States," including wetlands. For example, if in the course of a development project, a landowner wants to fill or disturb a wetland or stream, they must get a permit before doing so.

Authority for oversight of the § 404 program is split between the Army Corps and the U.S. Environmental Protection Agency (EPA) (collectively, "the agencies"). The Army Corps is generally the first stop and point of contact for permittees and mitigation providers. It carries out the day-to-day permitting activities of the program in its 38 district offices (with the exception of Michigan and New Jersey, which have "assumed" administration of the § 404 program). Congress charged EPA with writing the environmental standards by which the Army Corps evaluates permits (referred to as the §404(b)(1) Guidelines). It also has the authority to veto permits issued by the Army Corps, a mechanism that is used sparingly.

The Army Corps, the lead regulatory agency for wetland permits in Utah, looks at three factors to determine whether an area is a wetland:

1) evidence of wetland hydrology (e.g., water or signs of water such as sediment deposits, dry algae, soil cracking, flow patterns),

2) abundance of wetland-associated vegetation (obvious species such as cattail and bulrush, but also many grasses, sedges, and other plants), and
3) hydric soil indicators (distinct soil textures and colors that form in soils that are frequently saturated).

If you have any reason to believe there may be wetlands on a property you are considering developing, you may want to consult with the local office of the Army Corps to discuss your plans, possible impacts to wetlands and other aquatic resources, and if those resources fall within the regulatory jurisdiction of the Army Corps. If a permit is required, the Army Corps can walk you through what the permitting process will look like for your project. If you are concerned about wetlands on agricultural land, the NRCS can conduct a delineation on the property and help you understand the applicable regulations for agricultural use.

It is important to not only look for listed indicators, but to use best professional judgment to determine the likelihood of having false negatives or false positives. Hydrophytic vegetation and hydric soils at recently altered sites can be indicators of past rather than current conditions. Drier-than-normal conditions can lead to an absence of indicators of wetland hydrology at normally wet sites, and wetter-than-normal conditions and recent heavy rainfall events can lead to the presence of indicators of wetland hydrology at sites that are not wetland. It is important to pay attention to seasonal norms, recent precipitation events, and signs of site alteration such as draining.

Wetland Mitigation Sequence

Prior to issuing a § 404 permit, the Army Corps must make a determination that potential impacts have been avoided "to the maximum extent practicable" and minimized "to the extent appropriate and practicable." Once potential impacts to wetlands, streams, and other aquatic resources are avoided and minimized, the remaining impacts must be offset or compensated for, again, to the extent "appropriate and practicable."

After the applicant submits a permit application to the Army Corps' district office, it must provide an explanation of how they intend to avoid and minimize impacts to aquatic resources at the project site. At the time the permit application is submitted, the

applicant must also provide a brief description of how it proposes to compensate for any remaining impacts to wetlands, streams, or other aquatic resources.

The Army Corps and the applicant then begin what is often an iterative process to satisfy the avoidance and minimization requirements. This process can lead to more and different avoidance and minimization measures than those that were originally outlined in the application. Typically, the avoidance and minimization process involves the following steps:

Avoidance

- **The Alternatives Test:** This test is designed to identify the "least environmentally damaging practicable alternative" or "LEDPA." Applicants may not be issued a permit if there is a "practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem…" When the Army Corps receives an application for a project that will impact a wetland or stream, the agency must determine if such an alternative exists. Under its regulations, the Army Corps must presume that there are non-wetland alternative sites on which to locate nonwater dependent projects. The Army Corps also presumes that alternatives that do not impact wetlands or streams are less damaging to the aquatic ecosystem and are environmentally preferable. An alternative is "practicable" if it is available and reasonable with regard to scope, cost, existing technology, and logistics. Finally, in order to grant the permit, the Army Corps must make a finding that the proposed project is the LEDPA.
- **Other Environmentally Significant Impacts:** The Army Corps may not issue the permit if the proposed activity will result in a violation of state water quality standards or toxic effluent standards, jeopardize a threatened or endangered species, or violate requirements imposed to protect a marine sanctuary.
- **Anti-Degradation Provision:** The Army Corps may not issue the permit if the proposed activity will cause or contribute to significant degradation of the waters of the United States. Significant degradation may include individual or cumulative impacts to human health and welfare; fish and wildlife; ecosystem diversity, productivity, and stability; and recreational, aesthetic, or economic values.

Minimization

After impacts have been avoided as much as possible, the Army Corps must ensure that remaining impacts are then minimized as much as possible.

Minimization actions may address the planning and design stages, as well as the construction or implementation phases. Minimization actions may include changing the location of the impact on the site, reducing the size of the impact on the site, reducing temporary impacts during construction (e.g., stormwater management techniques) or changing the effects of the project on plants, animals, and human uses.

Compensatory Mitigation

After the applicant has gone through the avoidance and minimization procedures, they discuss their compensatory mitigation proposal with the Army Corps. The amount and type of compensatory mitigation that is required is included in the Special Conditions of the permit. Compensation may also be referred to as an offset – stated differently, compensation is used as a mechanism to offset permitted impacts. The amount of compensation is driven by the degree to which ecological functions are degraded or lost at the impact site. Losses at the impact site are expressed as debits. Debits can be estimated using sophisticated functional assessment methods or by relying on acreage or linear foot-based ratios.

Ideally, the Army Corps will use a science-based "functional or condition assessment method" to evaluate the impact site and compare it to the proposed compensation site, thereby using like measures to determine if the compensation will adequately replace lost aquatic resource functions. These assessment methods, which are tailored to geographically specific aquatic resource types, are available in many parts of the country. They can be complicated, but permittees often enlist the expertise of a qualified consultant to carry them out.

If a developer undertakes an activity that leads to the loss of wetland or stream acres and functions, the developer now needs to replace those lost acres and functions with offsets. Wetland and stream offsets are expressed as credits. Mitigation providers generate credits through the four methods defined in the following section (restoration, establishment, enhancement, and preservation). The amount of credits each compensatory mitigation site will generate may depend upon the method of mitigation used, the assessment tool used, and in some cases may entail some negotiation between the mitigation provider and the Army Corps. Generally speaking, the Army Corps either uses established credit

ratios or a functional assessment method to determine the number of credits that a compensatory mitigation project would yield.

Mitigation Methods

The agencies have identified four methods that can be used to meet a permittee's compensatory mitigation obligations: restoration, establishment (creation), enhancement, and preservation.

- **Restoration** is "the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purposes of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation."

  Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.

- **Establishment** (creation) is "the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site."

  Establishment "results in a gain in aquatic resource area and functions."

- **Enhancement** is "the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s)."

  Enhancement results "in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area."

- **Preservation** is "the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and

physical mechanisms."

Preservation "may be used to provide compensatory mitigation when all of the following criteria are met:

1) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;
2) The resources to be preserved contribute significantly to the ecological sustainability of the watershed;
3) Preservation is determined by the district engineer to be appropriate and practicable;
4) The resources are under threat of destruction or adverse modifications; and
5) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust)."

"Where preservation is used to provide compensatory mitigation…[it] shall be done in conjunction with aquatic resource restoration, establishment, and/or enhancement activities. This requirement may be waived by the district engineer where preservation has been identified as a high priority using a watershed approach…, but credit ratios shall be higher."

Utah Standards of Quality for Waters of the State

Standards of Quality for Waters of the State of Utah are defined in R317 - Environmental Quality, Water Quality. These water quality standards are in place to conserve the waters of the state and to protect, maintain and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and aquatic life, and for domestic, agricultural, industrial, recreational and other legitimate beneficial uses; to provide that no waste be discharged into any waters of the state without first being given the degree of treatment necessary to protect the legitimate beneficial uses of such waters; to provide for the prevention, abatement and control of new or existing water pollution; to place first in priority those control measures directed toward elimination of pollution which creates hazards to the public health; to insure due consideration of financial problems imposed on water polluters through pursuit of these objectives; and to cooperate with other agencies of the state, agencies of other states and the federal government in carrying out these objectives.

Utah Division of Water Quality Wetland Program Development

The Utah Division of Water Quality (UDWQ) of the Utah Department of Environmental Quality (UDEQ) received a Fiscal Year (FY)16-FY17 Wetland Program Development Grant (WPDG) to develop a designated use category and appropriate narrative criteria for Utah wetlands based on previously developed water resource and wetland planning tools. All wetlands below an elevation of 4,208 feet are designated as Transitional Waters of Great Salt Lake (5E). Wetlands within state and federal wildlife management areas have been assigned recreational and aquatic life designated uses (usually 2B, 3C, and 3D). All other wetlands are considered Waters of the State and hold the default beneficial uses of secondary contact recreation and warm-water aquatic life. More information about Utah designated beneficial uses for waters and wetlands of the State can be found in the Project Summary for Wetland Program Development Grant FY2016-17 CD-96852601. In their final report, "Improving Great Salt Lake Wetland Quality Through Monitoring of Wetland Uses, Water Quality, and Condition," UDWQ shares results from impounded and fringe wetlands monitoring and assessment projects around the Great Salt Lake.

Utah's Wetland Program Plan 2018-2023

Utah's Wetland Program Plan is a document authored by the UGS and the Utah DWQ to guide the direction of state activities related to wetlands. The overall goal of the plan is to increase the amount and availability of scientific data on Utah's wetlands by continuing to build and deploy scientifically based tools to assess wetland health and to afford greater protection by determining wetland-specific beneficial uses and criteria to protect those uses.

Utah Department of Natural Resources Utah Geological Survey

The Utah Geological Survey is part of an ongoing effort to develop a comprehensive, modern wetland dataset for the state. The UGS actively updates the NWI mapping across Utah and has completed mapping projects around Great Salt Lake, Jordan River, Bear Lake and the upper Bear River basins, and parts of the Uinta Basin. Updated wetland mapping is available to download and view at several locations such as the Utah Geospatial Resource Center (UGRC) and the National Wetlands Inventory (NWI) Wetlands mapper. Publicly accessible wetlands are inventoried and listed on the UGS website. The UGS maintains a collection of documents on topics such as wetland management, wetland restoration, and both public and private wetlands relevant to Utah.

Utah Rapid Assessment Procedure for Wetland Resources

The Utah Geological Survey (UGS) began developing the Utah Rapid Assessment Procedure (URAP) in 2014 as a tool to rapidly assess the condition of Utah's wetland resources. Condition and function assessments can be used to identify priority sites for restoration projects (those with lower condition scores or higher function scores) or conservation actions (those with higher condition and function scores). With repeat sampling, URAP can be used to evaluate the success of restoration projects or the effects of new stressors on wetland condition and function. When applied to a random selection of wetlands, URAP can be used to make generalizations about the health and function of all wetlands in an ecoregion, management area, watershed, or other area of interest. This baseline data can be used to identify rare or threatened wetland types and common regional causes of wetland degradation and to inform management and conservation actions.

In-Lieu Fee Program

An in-lieu-fee (ILF) program is an agreement between a regulatory agency or agencies (state, federal, or local) and a single sponsor which must be a public agency or non-profit organization. Under an ILF agreement, the mitigation sponsor collects funds from permittees in lieu of providing permittee-responsible compensatory mitigation required under the Army Corps or a state or local aquatic resource regulatory program. The sponsor uses the funds pooled from multiple permittees to create one or more sites under the authority of the agreement to compensate for aquatic resource functions lost as a result of the permits issued.

An ILF mitigation program in the State of Utah has the potential to streamline wetland permitting and increase the quality of wetlands in Utah. The ILF program collects fees from multiple permits and then can combine the fees to fund large wetland projects in places where they are more likely to succeed. The Army Corps and a team of scientists provide feedback on and approve the ILF program's mitigation plan and all the projects they build. An ILF also takes responsibility for monitoring the progress of wetland projects and long-term site management.

During the 2022 Utah Legislative Session, Representative Casey Snider proposed House Bill 118—Wetland Amendments— which asked the UGS to study how an ILF might work in Utah. ILF programs in other states highlighted the opportunities for a state with a lot of public lands and the possible flexibility if fees are designed with arid lands in mind. For an ILF program to become a self-sustaining program it will need a program administrator

who can focus on planning the program structure and getting approval from the Army Corps.

Utah Designated Beneficial Uses for Wetlands

Currently Utah has five designated beneficial use categories: water source for domestic systems, recreational use and aesthetics, aquatic wildlife, agricultural use, and Great Salt Lake (Utah Administrative Rule R317-2-6). Wetland mitigation projects within UIPA project areas that mitigate wetlands with these designated beneficial use categories should be prioritized.

Great Salt Lake Watershed Enhancement Program

Utah State House Bill 410 enacts the Great Salt Lake Watershed Enhancement Program. The Great Salt Lake (GSL) Watershed Enhancement Program was established by the Utah Legislature in 2022 to create a water trust for Great Salt Lake. The recently formed Trust is co-managed by the National Audubon Society (NAS) and The Nature Conservancy (TNC) and is one of Utah's key strategies to prevent further drying of the lake. Wetland mitigation projects within UIPA project areas that partner with the GSL Watershed Enhancement Trust should be prioritized.

Wetland Mitigation in UIPA Project Areas

For purposes of this section, wetlands are areas that are inundated or saturated by surface of ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, or in the case of playas, hydrologic solid indicators such as cracked soil and salt crust. In the intermountain west, wetlands typically consist of fresh and saltwater marsh, wet meadows, playas, and mudflats.

Landowners within UIPA project areas that have wetlands present on their properties may be eligible for UIPA incentives if their projects avoid impacting the wetlands on their property, enhance or restore existing wetlands on or near their property, establish new wetlands on or near their property, or permanently preserve existing wetlands on or near their property at the benefit of the surrounding environment.

For UIPA's Northwest Quadrant Project Area, tax differential funds outlined in the Interlocal Cooperation Agreement between Salt Lake City Corporation, Redevelopment Agency of Salt Lake City and the Utah Inland Port Authority may be used for wetland mitigation projects within or at a location with a nexus to the Northwest Quadrant as determined in collaboration with Salt Lake City and upon approval of UIPA's Board.

BP-17 NATURAL RESOURCES

For UIPA project areas outside of the Northwest Quadrant containing wetlands within either the Great Salt Lake or Utah Lake watershed, at least 1% of the tax differential for the associated project area shall go towards wetland mitigation within or at a location with a nexus to that project area upon approval of UIPA's Board. For all other UIPA project areas containing wetlands, at least 1% of the tax differential for the associated project area may go towards wetland mitigation within or at a location with a nexus to that project area upon approval of UIPA's Board.

Upon approval of UIPA's Board, tax differential funds designated towards wetland mitigation may be used for the following types of activities beyond what is required by Federal and State regulations:

- water purchases
- land easements for natural buffer zones
- wetland characterization
- wetland mitigation methods identified by the EPA and the Army Corps

Wetland mitigation projects should be prioritized if:

- the project mitigates wetlands that are part of a larger wetland complex;
- the project mitigates wetlands with a designated beneficial use category for wetlands;
- the project partners with the GSL Watershed Enhancement Trust;
- the project is located adjacent to or within 600 feet of a wildlife/waterfowl management area or a national refuges; or
- the project creates (a) natural, ecologically meaningful buffer zone(s) between wetland complexes and development areas.

Actions that leave only isolated small wetlands surrounded by development are disfavored. UIPA will coordinate wetland mitigation expenditures with the Utah Department of Natural Resources and the Great Salt Lake Commissioner.

IX. Dark Skies

As a guiding environmental principle, the UIPA core values embody supporting communities that want to better accommodate dark sky developments within their boundaries. The UIPA has developed in partnership with DarkSky Utah, the following Responsible Outdoor Lighting Standards which establish minimum DarkSky requirements for all outdoor lighting associated with commercial, industrial, logistics, warehousing, manufacturing, and operations facilities.

These standards are not required for a UIPA project area, or the Jurisdictional Authority. At their discretion, a community may designate their portion of a UIPA project area, or the Jurisdictional Authority, to abide by these standards and guidelines. If a community requests this designation, then any stakeholder that is interested in benefitting from UIPA funding must abide by these guidelines. A community may request this designation with a written request from the executive elected officer of their jurisdiction, accompanied by a resolution from the elected governing body for that jurisdiction.

If a community makes this designation they are responsible for all compliance related to these measures. A community may notify UIPA if they find violations to these guidelines. The Port will then assess a penalty commensurate with the violation and restrict any future funding to the violating stakeholder until the penalty is paid and compliance is confirmed. The Port will not require repayment of past funding allotments.

These guidelines are intended to:

- Prevent unnecessary light pollution, sky glow, glare, and light trespass onto sensitive areas such as adjacent residential properties, public lands, and sensitive natural areas including the Great Salt Lake ecosystem and migratory bird corridors.
- Protect public health by limiting the effects of artificial light at night on human circadian rhythms and sleep.
- Ensure that all required lighting is purposeful, targeted, appropriately bright, and controlled — consistent with the Five Principles for Responsible Outdoor Lighting co-developed by DarkSky International and the Illuminating Engineering Society (IES).
- Provide a clear, enforceable, and operationally workable framework that industrial tenants and developers in UIPA jurisdictional and project areas can implement from the design phase forward.

The purpose of these standards is to guide all new outdoor lighting installations and substantial modifications of existing lighting systems within UIPA jurisdictional and project areas, with best

practices for responsible outdoor lighting, and to substantial modifications of existing lighting systems. They apply to all site types within UIPA jurisdictional and project areas, including, but not limited to warehouses, distribution centers, intermodal yards, truck staging areas, parking facilities, perimeter security lighting, and roadway lighting within site boundaries.

These standards draw from IES ANSI/RP-7-21 (Lighting Industrial Facilities), IES RP-33 (Lighting for Exterior Environments), the DarkSky/IES Joint Model Lighting Ordinance (2011), the DarkSky International Municipal Ordinance Template (2024), the DarkSky Port Marine Terminal Lighting Program (2025), and enacted ordinances from Flagstaff AZ and Park City/Summit County UT.

Responsible Outdoor Lighting Requirements

These requirements were developed with reference to the following:

Standard / Source	Citation
IES ANSI/RP-7-21	Recommended Practice: Lighting Industrial Facilities. Illuminating Engineering Society, 2021.
IES RP-33	Lighting for Exterior Environments. Illuminating Engineering Society, 2014.
DarkSky/IES MLO	Joint Model Lighting Ordinance and User's Guide. IDA/IES, 2011. darksky.org/app/uploads/bsk-pdf-manager/16_MLO_FINAL_JUNE2011.PDF
DarkSky Municipal Template	Policy Outdoor Lighting – Municipal Ordinance Template and User Guide v1.0. DarkSky International, 2024. darksky.org
DarkSky PMTL Program	Port Marine Terminal Lighting Guidelines v1.0. DarkSky International, August 2025. darksky.org/darksky-approved/port-marine-terminal-lighting-program/
Flagstaff City Code	Division 10-50.70: Outdoor Lighting Standards. City of Flagstaff, AZ (amended 2022). codepublishing.com/AZ/Flagstaff
Summit County UT Code	Development Code, Snyderville Basin. Summit County, UT (adopted 2021, full compliance 2024). summitcountyutah.gov

Park City Code	Land Management Code §15-5-5(J). Park City, UT (adopted 2021).
Flagstaff Dark Skies Coalition	Model Lighting Ordinances – Dark Sky Impacts. FDSC, 2015. flagstaffdarkskies.org
Luginbuhl et al., 2009	"From the Ground Up I: Light Pollution Sources in Flagstaff, Arizona." Publications of the Astronomical Society of the Pacific.

These apply to every fixture, regardless of use type or operational schedule.

Color Temperature (CCT)

All outdoor luminaires shall have a correlated color temperature (CCT) of 3,000 Kelvin (K) or below.

- The warm-spectrum limit applies to all fixture types: area lights, security lights, perimeter lights, pole-mounted fixtures, wall packs, canopy lights, and roadway lights.
- Fixtures with field-selectable CCT must be factory-locked at 3000K or below at time of installation. Field adjustment to higher CCT shall not be permitted without written UIPA approval.
- Temporary construction lighting is exempt for periods not to exceed 90 days per project phase, provided all other requirements are met.

Blue-rich white light (4000K+) scatters more readily in the atmosphere, contributing disproportionately to sky glow. It also suppresses melatonin more severely in both humans and wildlife. A 3000K limit — now standard in many Utah and national jurisdictions — significantly reduces these impacts with no operational penalty.

Fixture Shielding (Full Cutoff Required)

All outdoor luminaires shall be fully shielded fixtures, emitting no light above 80 degrees from nadir (straight down) in their final installed position. This standard is adopted from the DarkSky International Port Marine Terminal Lighting Program (2025). As a note, this is more stringent than the conventional 90-degree full-cutoff definition.

- No unshielded, semi-shielded, or "cobra head" style fixtures with upward light emission are permitted.
- Wall packs shall be of the flat-glass, full-cutoff type. Angled or drop-lens wall packs are prohibited.
- All fixtures shall achieve a BUG (Backlight-Uplight-Glare) Uplight rating of U0. However, a U0 rating on a photometric report is not sufficient for compliance if the fixture is tilted in its installed position — the 80-degree-from-nadir standard applies to the fixture as aimed, not as tested on a level surface.
- Fixtures shall be installed and aimed to direct light only at the intended target area. Poles and brackets shall not be tilted to project light beyond the property boundary. Tilted installations require supplemental photometric documentation demonstrating that the 80-degree limit is maintained in the as-installed position.

Full shielding alone can reduce sky glow by 50–90% compared to unshielded or partially shielded fixtures, and dramatically reduces glare and light trespass. It is the single highest-impact measure available (Luginbuhl et al., 2009; Flagstaff Dark Skies Coalition).

Light Levels: Light is Tailored to What is Needed

Illuminance levels shall not exceed those recommended by the applicable IES standard for the specific use type. Over-lighting is prohibited.

Use Type	Recommended Illuminance (IES RP-7-21)	Maximum Permitted
Active loading docks	10–20 fc average	20 fc average
Truck staging / yard	2–5 fc average	5 fc average
Parking areas (active)	1–3 fc average	3 fc average
Parking areas (Non-Operational Setting)	0.5 fc maintained	0.5 fc maintained
Perimeter security	0.5–1 fc	1 fc at fence line

Pedestrian pathways	0.5–1 fc average	1 fc average

fc = foot-candles. All values are maintained averages at grade level unless noted. Uniformity ratios (max:min) shall not exceed 10:1 for any outdoor area. Where IES RP-7-21 or the applicable IES standard specifies a more stringent uniformity ratio for a particular use type, that more stringent ratio governs. The certifying lighting designer (Section 5, item 6) is responsible for applying the correct IES use-type-specific ratios in the photometric calculations.

Light Trespass Limits

Lighting shall be designed and installed to minimize light reaching beyond the facility boundary.

- Vertical illuminance measured at the property boundary, at 1.5 meters (5 ft) above grade, aimed perpendicular to the boundary, shall not exceed:
- 0.1 foot-candles (approximately 1 lux) at boundaries adjacent to residential properties, parks, or sensitive natural areas.
- 0.5 foot-candles (approximately 5 lux) at boundaries adjacent to other industrial or commercial properties.
- Light trespass onto the surface of the Great Salt Lake and its wetlands, Jordan River and its riparian areas, Weber and Bear Rivers and their riparian areas, Jordan River, or other Waters of the United States shall not exceed 0.1 foot-candles.
- Photometric calculations demonstrating boundary compliance shall be submitted as part of the lighting plan for all projects.

Uplighting Prohibition

Uplighting — any fixture configuration that emits light above 80 degrees from nadir in its final installed position — is prohibited, with the following limited exceptions:

- Flagpole illumination: permitted only for governmental or official flags. Downward-aimed fully shielded fixtures are the preferred approach and comply with the 80-degree standard without exception. Internal-illumination systems (which may emit some diffuse upward light as a byproduct of the illumination method) are permitted as a limited

exception to the uplighting prohibition, provided output does not exceed 1,300 lumens per flag.

- Architectural lighting: not permitted on UIPA industrial sites. Aesthetic uplighting of buildings or structures is not an approved use.
- Emergency lighting: temporary uplighting (searchlights, emergency beacons) is permitted during active emergency response only.

Lighting Controls: Operational Settings, Dimming, and Motion Sensors

All outdoor lighting shall incorporate automatic controls that reduce light to a Non-Operational Setting during periods of low or no activity. Because the Inland Port includes 24-hour operations, these standards do not impose a fixed clock-based curfew. Instead, each lighting zone shall have a defined Operational Setting (full output, active use) and a Non-Operational Setting (reduced output, no active use), with transitions triggered by verified activity rather than time of day.

- Operational Setting: Full lighting output is permitted only when workers, vehicles, or loading activity are actively present and moving within the lit zone. “Active” means personnel or vehicles are present and engaged in operational tasks within that specific zone.
- Non-Operational Setting — security and perimeter zones: When a zone is not in active use, perimeter security lighting and fence-line lighting shall dim to no more than 50% of full output. This floor recognizes the legitimate security function of perimeter lighting at large industrial facilities.
- Non-Operational Setting — parking, pathways, and secondary yard areas: When not in active use, these zones shall dim to no more than 30% of full output, or extinguish entirely where motion sensors are installed.
- Motion/occupancy sensors: Parking areas, pedestrian pathways, and secondary yard areas shall use occupancy or motion sensors that restore full Operational Setting lighting only when activity is detected, and return to the Non-Operational Setting within 10 minutes of last detected activity.
- Automated controls required: Manual switches alone do not satisfy these requirements. Automated activity-based controls, networked controls, or photocell-plus-schedule systems are required. Controls shall be tamper-resistant and documented in the lighting plan.

- Emergency override: A manual override capability for emergency or law enforcement use is permitted, provided it is documented, access-controlled, and self-resetting within 4 hours.

Modern networked LED systems allow zone-by-zone dimming tied to dock door activity, truck arrival sensors, or shift schedules — delivering measurable energy savings alongside light pollution reduction. Many tenants report 40–60% energy reductions after implementation. The zone-based Operational/Non-Operational framework is modeled on the DarkSky International Port Marine Terminal Lighting Program (2025).

Enhanced Requirements Adjacent to Sensitive Areas

Sites located within 1,000 feet of the following sensitive receptors are subject to enhanced requirements in addition to all Section 3 standards:

Sensitive Receptor Type	Enhanced Requirement
Residential properties	Light trespass limit reduced to 0.05 fc at boundary. Non-Operational Setting applies whenever no active operations are occurring; after 9:00 PM local time, Non-Operational Setting is mandatory regardless of operational status. All perimeter fixtures within 500 ft must be equipped with house-side shields.
Great Salt Lake shoreline / wetlands	The standard 3000K CCT limit (Section 3.1) applies. UIPA strongly encourages, but does not require, the use of 2700K or lower fixtures for sites within 1,000 feet of the shoreline, as warmer-spectrum light produces meaningfully less sky glow and biological disruption in sensitive ecosystems. UIPA will revisit whether to elevate the 2700K preference to a requirement for GSL-adjacent sites as the market for DarkSky-approved 2700K fixtures at industrial lumen outputs matures. No lighting shall be directed toward the lake surface. A buffer zone of 100 ft from the shoreline must

Sensitive Receptor Type	Enhanced Requirement
	remain unlit. Motion sensors required for all fixtures within 200 - 500 ft of the shoreline.
Jordan River Parkway corridor, Weber River, and Bear River	The standard 3000K CCT limit (Section 3.1) applies. UIPA strongly encourages, but does not require, the use of 2700K or lower fixtures for sites within 1,000 feet of the shoreline, as above. No fixtures within 200 ft of river centerline may direct light toward the river. Motion sensors required for all fixtures within 500 ft of river. The standard Operational/Non-Operational Setting framework of Section 3.6 applies to all zones in this corridor.
Migratory bird corridors (spring/fall)	During peak migration periods (March–May, August–November), the Non-Operational Setting is tightened: all zones not in active use must dim to 30% or off, with no exceptions for the standard 50% security floor. Active operational zones may remain at full output only while workers or vehicles are present. Facade lighting (if any) must be extinguished entirely from 11:00 PM – 6:00 AM during migration season regardless of operational status.

Lighting Stewardship Plan Submittal Requirements

All new developments and substantial lighting modifications within UIPA project areas that want to be considered compliant with this policy shall submit a Lighting Stewardship Plan to their respective community for review and approval prior to construction.

The Lighting Stewardship Plan shall include:

- Site plan showing all fixture locations, pole heights, fixture types, and mounting orientations.

- Fixture cut sheets for each luminaire type, including manufacturer, model, CCT, lumen output, BUG rating, and IES photometric file (.ies format).
- Photometric calculations (point-by-point foot-candle grid) demonstrating: (a) compliance with illuminance levels in these Responsible Outdoor Lighting Requirements; (b) uniformity ratios; (c) boundary light trespass compliance per these Responsible Outdoor Lighting Requirements.
- Controls narrative describing the Operational and Non-Operational Settings for each lighting zone, the activity-detection system or trigger mechanism used, dimming levels, motion sensor placement and timing, override capability, and maintenance plan.
- Sensitive area analysis: identification of all sensitive receptors within 1,000 feet and documentation of enhanced measures per these Responsible Outdoor Lighting Requirements.

- Certification by a licensed lighting designer or engineer that the design complies with IES ANSI/RP-7-21, IES RP-33, and these standards.

X. Water Conservation

As a guiding environmental principle, the UIPA core values embody supporting communities that want to better protect and conserve water resources within their boundaries. The UIPA has developed in partnership with Water Ways Utah, the following standards, which establish requirements for all water related activities associated with commercial, industrial, logistics, warehousing, manufacturing, and operations facilities within UIPA jurisdictional and project areas that elect this designation.

These standards are not required for a UIPA project area, or the Jurisdictional Authority. At their discretion, a community may designate their portion of a UIPA project area, or the Jurisdictional Authority, to abide by these standards and guidelines. If a community requests this designation, then any stakeholder that is interested in benefitting from UIPA funding must abide by these guidelines. A community may request this designation with a written request from the executive elected officer of their jurisdiction, accompanied by a resolution from the elected governing body for that jurisdiction.

If a community makes this designation they are responsible for all compliance related to these measures. A community may notify UIPA if they find violations to these guidelines.

The Port will then assess a penalty commensurate with the violation and restrict any future funding to the violating stakeholder until the penalty is paid and compliance is confirmed. The Port will not require repayment of past funding allotments.

These guidelines are intended to ensure:

- **Water-Neutral Growth**: New development should not increase net water demand where feasible.
- **Design for Utah First**: Site, landscape, and infrastructure decisions reflect Utah conditions—not legacy norms.
- **Efficiency as Infrastructure**: Water efficiency is treated as core infrastructure (like power or roads), not an add-on.
- **Source-Aware Planning**: Align land use with actual water supply constraints (surface, groundwater, reuse).
- **Dual Impact Design**: Prioritize projects that deliver co-benefits (air quality, heat island reduction, GSL health).

A community that requests this designation shall, in coordination with the UIPA, establish:

Land Use & Water Budgeting

Shift away from entitlement-based water assumptions to budgeted planning.

- Parcel-Level Water Budgets
  - Establish gallons/acre/year targets by land use type:
    - Industrial/logistics (low baseline)
    - Commercial/office
    - Mixed-use/light industrial
  - Require water budgets at entitlement + site plan phases
  - Tie approvals to demonstrated compliance
- Water Demand Hierarchy
  1. Eliminate unnecessary demand outdoors (e.g., non-functional turf)
  2. Maximize efficiency both indoor and outdoor (fixtures, processes)
  3. Utilize alternative water sources when available (reuse, secondary)
  4. Offset remaining demand (regional conservation contributions)

Outdoor Standards - Landscape & Site Design

Outdoor use remains the largest opportunity (often ~60–65%).

- Required Standards
  - No ornamental turf in industrial/commercial frontage or setbacks
  - Hydro zoning required (grouping plants by water needs)
  - Drip irrigation as default (no overhead spray except limited use cases)
  - Tree canopy targets
- Approved Planting Framework
  - "Designed for Utah" palette (regionally adapted, drought-tolerant)
  - Incentivize:
    - Shade trees (heat + air quality co-benefits)
    - Pollinator/native species
    - Low-water groundcovers vs. rock-only landscapes
  - Demonstration Requirement
    - Require or incentivize visible demonstration landscapes within the port:
      - Co-branded UWW/UIPA sites
      - Used for contractor training + public education
      - Documented and replicated across parcels

Built Environment & Industrial Water Efficiency

Focus on operational water use which is often overlooked in policy.

- Building Standards
- High-efficiency fixtures (WaterSense baseline or better)
- Cooling system optimization:
  - Closed-loop systems preferred
  - Drift and evaporation controls required
- Smart metering at building and sub-system levels (work with conservancy district and/or city)
- Industrial/Operational Use
- Require process water audits for high-use tenants
- Encourage:
  - Water recycling within facilities
  - Alternative cooling technologies where feasible

Policy & Regulatory Tools (UIPA Implementation)

Translate best practices into incentivized mechanisms.

- Development Standards
  - Water efficiency requirements embedded in:
    - Design review

        - Development agreements
        - Leasing standards ??
- Incentives
    - Faster permitting for water-efficient projects
    - Co-funding for demonstration landscapes
- Ordinance Alignment
    - Align with regional municipal ordinances on:
        - Turf restrictions
        - Landscape requirements
        - Water-wise development codes