

## **ABBREVIATIONS AND GLOSSARY**

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# 1 Abbreviations

ΔE - total color contrast	B20 - a blend of 20% biodiesel and 80% petroleum diesel
A.A.C - Arizona Administrative Code	b - screened interval
AAWS - Analyses of Assured Water Supply	BA - biological assessment
ABOWG - Arizona Burrowing Owl Working Group	BACT - best available control technology
AC - alternating current	B.C. - Before Christ
ACC - air-cooled condenser	BCC - Birds Of Conservation Concern
ACEC - area of critical environmental concern	BGEPA - Protected under Bald and Golden Eagle Protection Act
ACHP - Advisory Council on Historic Preservation	BHRA - Buckeye Hills Recreation Area
A.D. - after the death	BHRP - Buckeye Hills Regional Park
ADA - Arizona Department of Agriculture	BLM - Bureau of Land Management
ADEQ - Arizona Department of Environmental Quality	BLMS - BLM Sensitive Species
ADOT - Arizona Department of Transportation	bls - below land surface
ADWR - Arizona Department of Water Resources	BMP -best management practices
afy - acre-feet per year	Boulevard - Boulevard Associates, LLC
AGS - Arizona Geological Survey	B.P. - before present
ALERT - Automated Local Evaluation in Real Time	BSC - biological soil crust
AMA - active management area	btu/scf - British thermal unit/standard cubic feet
amsl - above mean sea level	BWCDD - Buckeye Water Conservation and Drainage District
ANM - Arizona New Mexico	C <sub>2</sub> H <sub>6</sub> - ethane
ANSI - American National Standards Institute	C <sub>3</sub> H <sub>8</sub> - propane
AO - authorized officer	C <sub>4</sub> H <sub>10</sub> - butane
APE - area of potential effect	C <sub>5</sub> H <sub>12</sub> - pentane
APHIS - Animal and Plant Health Inspection Service	C <sub>6</sub> H <sub>12</sub> - hexane
APP - aquifer protection permit	CAA - Clean Air Act
APS - Arizona Public Service	CaCO <sub>3</sub> - calcite
APVE - area of potential visual effects	Cal-IPC - California Invasive Plant Council
A.R.S. - Arizona Revised Statutes	CAM - compliance assurance monitoring
ASDM - Arizona-Sonora Desert Museum	CAP - Central Arizona Project
ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers	CAWS - Certificate of Assured Water Supply
ASM - Arizona State Museum	CCC - Civilian Conservation Corps
AUM - animal unit month	CDIAC - Carbon Dioxide Information Analysis Center
AWS - Assured Water Supply (program)	CEAA - cumulative effects assessment area
AZ - Arizona State Route	CEC - Certificate of Environmental Compatibility
AZGFD - Arizona Game and Fish Department	CEP - Capacity Enhancement Program
AZHGIS - Arizona Heritage Geographic Information System	CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
AZNM WECC - Arizona New Mexico Western Electricity Coordinating Council	CEQ - Council on Environmental Quality
AZPDES - Arizona Pollutant Discharge Elimination System	CFC - chlorofluorocarbon
AZSERC - Arizona Emergency Response Commission	CFR - Code of Federal Regulations
AZ-WIPWG - Arizona Wildlands Invasive Plants Working Group	cfs - cubic feet per second
B5 - a blend of 5% biodiesel and 95% petroleum diesel	CH <sub>4</sub> - methane

CLOMR - Conditional Letter of Map Revision	FLPMA - Federal Land Policy and Management Act of 1976
CNEL - community noise equivalent level	FO - field office
CO - carbon monoxide	ft/d - feet per day
CO <sub>2</sub> - carbon dioxide	GAP - Gap Analysis Program
CST - concentrated solar thermal	GFR - grandfathered right
CWA - Clean Water Act	gen-tie - generation tie
CY - cubic yards	GHG - greenhouse gas
D - daytime	GIU - general industrial use
DAWS - Designation of Assured Water Supply	GIS - geographic information system
dB - decibel(s)	GLO - General Land Office
dBA - A-weighted decibel(s)	gpd - gallons per day
DC - direct current	gpd/ft - gallons per day per foot
DDT - dichlorodiphenyltrichloroethane	gpm - gallons per minute
DHS - Department of Homeland Security	GPS - global positioning system
DMMR - Department of Mines and Mineral Resources	g/s - grams per second
DOE - U.S. Department of Energy	GWh - gigawatt hour
DOI - U.S. Department of the Interior	GWP - global warming potential
DSRP - decommissioning and site reclamation plan	GWSI - Ground Water Site Inventory
eGRID - EPA Emissions & Generation Resource Integrated Database	ha - hectares
E - east	HAP - hazardous air pollutants
EAP - emergency action plan	HAZCOM -hazardous communication
EB - exploratory boring	HDMS - Heritage Data Management System
EDI - electrodeionization units	HDPE - high density polyethylene
EEC - Engineering and Environmental Consultants Inc.	HEC-RAS - Hydrologic Engineering Centers River Analysis System
EID - electrodeionization units	Hz - Hertz
EIS - environmental impact statement	HTF - heat transfer fluid
eGRID - EPA Emissions & Generation Resource Integrated Database	HMTA - Hazardous Materials Transportation Act
EJ - environmental justice	hp = horsepower
EMF - electric and magnetic fields	I - interstate
EO - Executive Order	ID - identification
EPA - U.S. Environmental Protection Agency	ID Team - interdisciplinary team
EPA ID - Environmental Protection Agency Identification	IFC - International Fire Code
EPCRA - Emergency Planning & Community Right-to-Know Act	IGR - irrigation grandfathered rights
EPG - Environmental Planning Group	IM - instruction memorandum
ERMA - extensive recreation management areas	INA - irrigation non-expansion area
ESA - Endangered Species Act	InSAR - interferometric synthetic aperture radar
F - Fahrenheit	<u>IOP - interim observation point</u>
FCDMC - Flood Control District of Maricopa County	IPCC - Intergovernmental Panel on Climate Change
FEMA - Federal Emergency Management Agency	ITC - Investment Tax Credit
FGR - flue gas recirculation	JD - jurisdictional determination
FHWA - Federal Highway Administration	K - hydraulic conductivity
FIRM - flood insurance rate map	K-8 - Kindergarten through eighth grade
FLAG - Federal Land Managers' Air Quality Related Values Work Group	KOP - key observation point
	kg - kilogram
	km - kilometers

kV -kilovolt	N - north
kW - kilowatt	N <sub>2</sub> - nitrogen
kWh - kilowatt-hour	N <sub>2</sub> O - nitrous oxide
Kw factor - erodibility of the whole soil	n/a - not applicable
L - liter	NAAQS - National Ambient Air Quality Standards
Ldn - day-night level	NEPA - National Environmental Policy Act
PEIS - programmatic environmental impact statement	NESHAP - National Emission Standards for Hazardous Air Pollutants
Pb - lead	NFPA - National Fire Protection Association
Leq - equivalent noise level	NHPA - National Historic Preservation Act
LEPC - Local Emergency Planning Committee	NMMW - North Maricopa Mountains Wilderness
LNB - low NO <sub>x</sub> burner	NOA - notice of availability
LOMR - Letter of Map Revision	NO <sub>2</sub> - nitrogen dioxide
LOS - level of service	NOI - notice of intent
LORS - laws, ordinances, regulations and standards	NPDES - National Pollutant Discharge Elimination System
LSFO - Lower Sonoran Field Office	NPS - National Park Service
LT - long term (e.g., LT-1)	<u>NREL - National Renewable Energy Laboratory</u>
LUP - land-use plan	NRHP - National Register of Historic Places
m - meter	NSHT - national scenic and historic trails
MACT - maximum achievable control standards	NSPS - New Source Performance Standards (40 CFR 60)
MAG - Maricopa Association of Governments	NREL - National Renewable Energy Laboratory
MBD - mixed bed demineralizers	NRS - Federal New Source Review
MBTA - Migratory Bird Treaty Act	NO - nitric oxide
MCAQD - Maricopa County Air Quality Department	NOI - notice of intent
MCDF - Maricopa County Department of Finance	NO <sub>2</sub> - nitrogen dioxide
MCDOT - Maricopa County Department of Transportation	NO <sub>x</sub> - nitrogen oxides
Mg - milligrams	NSHT - national scenic and historic trails
Mg/l - milligrams per liter	NSR - New Source Review
MgCl - magnesium chloride	O <sub>3</sub> - ozone
Mgals - million gallons	OHV - off-highway vehicle
MGD - million gallons per day	ORV - off-road vehicle
Mg/kg - milligrams per kilogram	OSHA - Occupational Safety and Health Administration
MIG - Minnesota IMPLAN Group	PAD - Physical Availability Determination
Mm-1 - inverse megameter	Pb - lead
MMBtu - million metric British thermal units	PCS - petroleum contaminated soil
MOA - memorandum of agreement	PEIS - Solar Energy Development Programmatic Environmental Impact Statement
MOU - memorandum of understanding	PFYC - Potential Fossil Yield Classification
mph - miles per hour	pH - measure of acidity
MPC - master planned community	PHF - peak hour factor
MSA - metropolitan statistical area	Phoenix MSA - Phoenix-Mesa-Scottsdale Metropolitan Statistical Area
MSDS - material safety data sheets	P.L. - Public Law
MtC/acre - metric tons of carbon per acre	PM - particulate matter
Mt CO <sub>2</sub> e - metric tons of carbon dioxide equivalent	PM <sub>10</sub> - inhalable particulate matter
MW - megawatt	PM <sub>2.5</sub> - fine particulate matter
MW-1 - monitoring well 1	POD - plan of development
MWh - megawatt hours	

PPE - personal protective equipment	STG - solar thermoelectric generator
ppm - parts per million	SWPPP - Stormwater Pollution Prevention Plan
ppmv - parts per million by volume	T - transmissivity
PSD - Prevention of Significant Deterioration	TCP - traditional cultural property
PV - photovoltaic	TDS - total dissolved solids
Q - Quarternary alluvium (in Paleontology sections)	TES - thermal energy storage
Q - pumping rate (in Water Resources sections)	THPO - Tribal Historic Preservation Officer
Q/s - specific capacity	TI - traffic interchange
Qy - young Quarternary alluvium	TIA - traffic impacts analysis
R - range	TPH - total petroleum hydrocarbon
RBWA - Robbins Butte Wildlife Area	tpm - tons per month
RCRA - Resource Conservation and Recovery Act	tpy - tons per year
RFA - reasonably foreseeable action	TNW - Traditional Navigable Water
RID - Roosevelt Irrigation District	TPQ - Threshold Planning Quantities
RMP - resource management plan	TW - test well
RO - reverse osmosis	TWA - time-weighted average
ROD - record of decision	UFC - Uniform Fire Code
ROS - Recreation Opportunity Spectrum	$\mu\text{g}/\text{m}^3$ - micrograms per cubic meter
ROW - right-of-way	U.S. - United States
s - total drawdown (in Water Resources section)	US-93 - U.S. Highway 93
SARA - Superfund Amendments and Reauthorization Act	USACE - U.S. Army Corps of Engineers
SCAQMD - South Coast Air Quality Management District	U.S.C. - United States Code
SCU - standard cubic feet	USDA - U.S. Department of Agriculture
SDNM - Sonoran Desert National Monument	USDOT - U.S. Department of Transportation
SEIA - Solar Energy Industries Association	USFWS - U.S. Fish and Wildlife Service
SESA - Socioeconomic Study Area	USGS - U.S. Geological Survey
SF - Standard Form (e.g., SF 299)	$\mu\text{T}$ - microtesla
SF <sub>6</sub> - Sulfur Hexafluoride	VOC - volatile organic carbons
SHPO - State Historic Preservation Office	vph - vehicles per hour
SIC - Standard Industrial Classification	VRI - visual resource inventory
SiO <sub>2</sub> - silicon dioxide	VRM - visual resource management
SIP - State Implementation Plan	WECC - Western Electricity Coordinating Council
SO <sub>2</sub> - sulfur dioxide	WHO - World Health Organization
SMCL - secondary maximum contaminant level	WIU - wilderness inventory units
SOX - sulfur oxides	WSA - wilderness study area
SPP - spill prevention plan	WSAC - wet surface air cooler
SR - State Route (e.g., SR-85)	WSC - wildlife of special concern
SRMA - special recreation management areas	WSR - wild and scenic river
SRP - Salt River Project	WSRV - West Salt River Valley
SSEP - Sonoran Solar Energy Project	WTP - water treatment plant
SSG - solar steam generator	WWTP - wastewater treatment plants
SSURG - Soil Survey Geographic Database	Xg - Early Proterozoic granitic rock
ST - short term (e.g., ST-1)	4WD - four-wheel drive
SWTE - SouthWest Traffic Engineering	

## Glossary

<b>Word/Term</b>	<b>Definition</b>
acre-foot	The volume of water that would cover 1 acre to a depth of 1 foot. One acre-foot of water is equivalent to 325,841.4 gallons or 43,560 cubic feet.
alluvial / alluvium	Consisting of alluvium, unconsolidated stream-deposited sediments such as sands, silts, clays or gravels.
applicant-committed environmental protection measure	Actions which would eliminate or minimize adverse impacts from construction and maintenance of the SSEP to sensitive resources.
aquifer	An underground bed or layer of permeable rock, sediment or soil that yields water.
backfill	The process of returning excavated material (i.e., earth) into the hole or trench from which it was removed.
biocide	Chemical mixture used to deter growth of algae or other organic material.
blowdown	Wastewater from a wet cooling tower – this water will have been cycled as many times as possible and will have reached the maximum allowable (and safe) limits of certain dissolved solids.
brine	High salinity water; in the case of this project, concentrated wastes from water treatment systems.
build-out	The full extent of construction activities at which point construction is complete and the facility is finished.
co-fired/co-firing	A process to assist or increase a concentrating solar power plant's energy production during periods of low solar insolation by burning fossil fuel, in this case, natural gas.
combined-cycle	A process combining the Brayton cycle (gas turbine) and the Rankine cycle (steam turbine) where the Rankine cycle uses waste heat from the Brayton cycle.
demineralizer	A piece of equipment used to remove dissolved solids (salts) from water, typically either an electrodeionization (EDI) system or a mixed bed resin.
desalination	The process of removing salt from water as total dissolved solids (TDS), typically performed by either reverse osmosis (RO), multi-stage flash (MSF) or multi-effect desalination (MED).
drawdown	The depletion or lowering of the water level in a reservoir or other body of water.
dry-cooling / dry-cooled	A process to achieve heat rejection from by using atmospheric air only.
easements	Legal authority granted to a party to cross another party's property.
ephemeral	Lasting for a very short time. In this application, desert washes that contain water in response to a storm event, but are otherwise dry.
footprint	The area on the ground occupied by a facility.
freeze-protection	A means to prevent a substance from freezing – in this case, a small heater will be used to keep the HTF above 100°F (HTF freezing point is 54°F).

<b>Word/Term</b>	<b>Definition</b>
forbs	Herbaceous (soft-stemmed) flowering plants that are not grass-like (grasses, sedges, rushes).
gas-backup	The use of gas-fired equipment to maintain service to all or a portion of the power plant if electrical power source is lost. See "co-fired/co-firing" for full plant gas-backup. Diesel generator and diesel engine pumps are examples of localized system gas-backup.
gas-fired	Any equipment operated by burning gaseous fossil fuel.
gen-tie (generation tie-line)	The transmission line that delivers generated electricity from the power plant to the electrical grid.
grazing allotments	Authorizations granted by the BLM for individual users to graze animals on federally managed land.
grubbing	Clearing an area of all roots, stumps and vegetation.
hybrid-cooled/hybrid-cooling	A means of power plant cooling that uses a combination of two or more different methods, usually wet and dry cooling.
hydrostatic testing	A process used to check piping for leaks in which the pipes are filled with water and pressurized, leaks are identified, and the water is purged from the lines.
igneous	Rock formed by cooling and solidification from a liquid state.
interferometric	Based on the interference between two waves used to measure very small distances and thicknesses, and calculate indices of refraction.
intermontane	Between or surrounded by mountains.
land-treatment unit	Area where HTF contaminated soil will be treated to reduce unwanted constituents to acceptable levels.
laydown	An area where construction material and equipment are staged during a construction operation.
leachate	A solution resulting from soluble constituents percolated by ground water.
linkages (wildlife)	A continuous swath of land in the natural landscape that provides suitable habitat for short-and/or long-term movements of wildlife and plants between population cores.
lithologic	Of the description, study or classification of rock.
long-term	In this application, persisting for more than five years.
marshalling yards	Areas where construction vehicles, equipment, or construction materials are stored and assembled.
oftakers	In this application, the off-taker is the purchaser of the generated electricity (i.e., a customer).
palliatives	In this application, a material used to bind the layers of surface soil to each other, to prevent them from becoming windblown dust, or rising into the atmosphere as a result of some other type of disturbance (i.e., vehicle traffic).
plume	A visible collection of particles in the atmosphere, generally dust, water vapor, or some other type of chemical vapor.
polymer	A large molecule composed of repeating structural units typically connected by covalent chemical bonds. In this application, a material that could be used to bind soil (see palliative).
riprap	A collection of stone, concrete, or masonry used to slow down or disperse flowing water.
riparian	Vegetation or physical characteristics that exist on the banks of a waterway.

<b>Word/Term</b>	<b>Definition</b>
short-term	In this application, persisting for five years or less.
single-axis-tracking	In this application, the mirrors (oriented in a north-south direction) will rotate about a point which goes through the longitudinal axis of the mirrors. The mirrors will thus track the sun in an east to west direction. In multiple axis tracking, the mirrors would rotate in several different directions (north-south and east-west) simultaneously.
spillways	Channels through which water flows.
switchyard	A collection of electrical transmission equipment and switchgear (i.e., circuit breakers, transformers, etc.), which usually also contains the beginning or end of electrical transmission lines.
thermodynamic	A means of converting heat into mechanical work.
turbine-generator (steam)	A machine consisting of a steam turbine and an electrical generator. The rotational energy of the steam turbine is converted to electricity by the generator.
wet-cooled	A process that uses water as the primary medium of heat rejection.
workover	An overhaul, major maintenance, reset, etc. to restore equipment or a system to improve performance.
zodiacal	A faint whitish glow just above the horizon produced by sunlight reflecting off of cosmic dust particles.

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