El Niguel Country Club

Turf Removal Project Proposal

December 15, 2014

EL NIGUEL COUNTRY CLUB
TURF REMOVAL PROJECT
MADE POSSIBLE BY
EL NIGUEL COUNTRY CLUB
MOULTON NIGUEL WATER DISTRICT
IN CONJUCTION WITH

El Niguel Country Club
Investment in Water Conservation

- 1968 - First club in the area to go to recycled water
- 1998 – Club expanded its reservoir from 1 to 3 million gallons to accommodate & store recycled water at the cost of approximately $800,000
- 2006 – Stopped overseeding the course with rye and encouraged Bermuda grass growth resulting in a large water savings
- 2007 – Club changed to state-of-art irrigation system, cost of about $3,000,000

El Niguel Country Club
Investment in Water Conservation

- 2014 – First club in the area to utilize turf reduction rebate program to reduce water usage, 10 acres converted to drought tolerant landscaping with drip system
- 2014 – Club converted non-turf plant areas to drought tolerant landscaping with drip system at a cost of approximately $35,000
- Club utilizes a state-of-the-art weather station & computerized system to efficiently manage our water usage
- Club has always partnered with Moulton Niguel Water District to be good stewards and help conserve water

Phase 1 Completed Turf Removal Project

- 435,600 sq. ft. of turf removed
- Turf replaced with drought tolerant landscaping and a drip irrigation system

Phase 1 Completed Turf Removal Project

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- Potential Rebate

  $653,400 MNWD at $1.50 per sq. ft.

  $871,200 MWDOC at $2.00 per sq. ft.

  $1,524,600 combined potential rebate at $3.50 per sq. ft.

- Project Cost

  $1,524,600 potential rebate at $3.50 per sq. ft.

  $1,121,397 actual cost at $2.58 per sq. ft.

  $403,203 under potential rebate

Phase 1 Completed Turf Removal Project

- Savings to MNWD

  $653,400 reserved for rebate

  $250,199 actual reimbursement

  $403,201 available for new conservation projects

Phase II Turf Reduction Rebate Request from MNWD and MWDOC

- Application submitted on 12/5/14
- 519,170 sq. ft. will enable us to complete all of our turf reduction
- Resulted in 5,000,000 gallons of recycled water and 500,000 gallons of potable water savings per year

Phase II Turf Reduction Rebate Request from MNWD and MWDOC

- Project Cost
  - $1,427,718 at $2.75 per sq. ft.

- Rebate Funding

  $1,427,718 total at $2.75 per sq. ft.
  - $1,038,340 MWDOC if rebates at $2.00 per sq. ft.
  - $389,376 MNWD if a rebate is at $.75 per sq. ft.

Phase II Turf Reduction Rebate Request from MNWD and MWDOC

- Results
  - $653,400 rebate set aside for 435,600 sq. ft. of turf reduction
  - For that same amount of money we will be able to reduce turf by 954,770 sq. ft.; 219% more turf removed

El Niguel Country Club

Turf Removal Project

Made possible by:

El Niguel Country Club

Moulton Niguel Water District

El Niguel Country Club

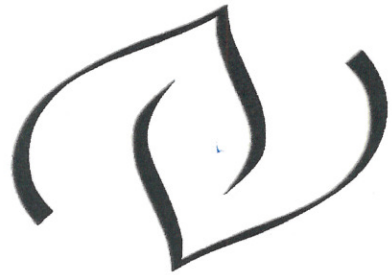
Moulton Niguel Water
Leading the Way in Service

In conjunction with:

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Aliso Viejo Country Club



Turf Reduction Proposal

Approval Requests

- 24 Acres of irrigated turf to be removed
  - California friendly plants and mulch to replace turf
  - Drip irrigation for reduced water usage
  - Rebate being requested is $1.50 / sq. ft
- 4 Acres of synthetic turf
  - Synthetic turf installed over existing turf
  - Rebate requested is the additional $1.50 / sq.ft for artificial turf
  - 0 Water usage
- Total potential rebate = $1,829,520

Preliminary Reduction Plan

Area Name	SF	AC
1	83405	1.91
2	69136	1.59
3	3935	0.09
4	39999	0.92
5	27915	0.64
6	47255	1.08
7	49221	1.13
8	17991	0.41
9	18398	0.42
10	42873	0.98
11	33061	0.76
12	6807	0.16
13	25898	0.59
14	5801	0.13
15	12877	0.29
16	97139	2.23
17	75739	1.74
18	94681	2.17
19	38960	0.89
20	37173	0.85
21	18494	0.42
22	49136	1.13
23	34894	0.80
24	36778	0.84
25	7671	0.18
26	87279	1.99
27	6388	0.14
28	7032	0.16
29	21462	0.49
30	15758	0.36
31	67199	1.54
Tee Total	146122	3.35
TOTALS	1291886	29.65

Aliso Viejo Country Club

Aliso Viejo
California

Preliminary
Turf
Reduction
Plan

Client:

Notes:
This plan was prepared from a Google Earth image and scaled as accurately as possible.

Designer:

Pascuzzo & Pate
GOLF COURSE DESIGN

Date: Nov. 11, 2014
Rev:

Scale: 1"=150'

1/1

Turf Conversion Exhibit

EXISTING CONDITIONS

Tee

Fairway

Fescue Turf on Hillsides

Secondary Roughs Converted to Much and Native Plants

Hillsides with Wood Mulch & Native Plants

PROPOSED CONDITIONS

Aliso Viejo Country Club

Aliso Viejo
California

TURF CONVERSION EXHIBIT

Client:

Club Corp USA
[redacted]

Notes:

Designer:

Pascuzzo & Pate
GOLF COURSE DESIGN

Date: August 24, 2014

Rev:

Scale: None

1/1

Synthetic Conversion Exhibit

Aliso Viejo Country Club

Aliso Viejo
California

TURF CONVERSION EXHIBIT

Client:

Notes:
The total of the area shown to be converted to non-irrigated mulch is 4.77 ac (208,212 sf). This illustration only a small part of the project site. The total acreage converted will be larger.

Designer:

Pascuzzo & Pate
GOLF COURSE DESIGN

Date August 18, 2014
Rev.

Scale: 1"=50'

1
1

Annual Water Conservation

- Based on MNWD's Commercial Landscape Allocation chart, the annual average ET in our area is 49.63

- This allocates us an estimated average 1,482 units of water per year per acre or 1,108,536 gallons of water a year.

Annual Water Conservation cont..

- 24 acres reduction could reduce water usage by **26,604,864** gallons of water annually or **81** acre feet

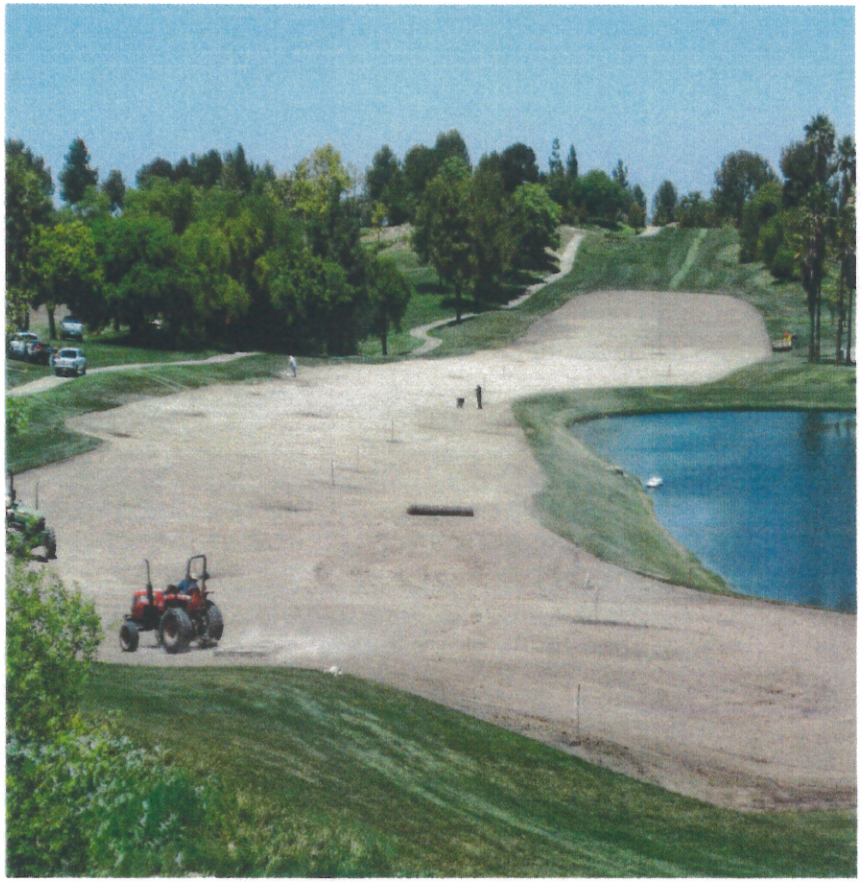
AVCC's Commitment to Water Conservation

- Swivel "L" installed for Potable / Reclaimed adaptability
- Fairway Turf Conversion to more drought tolerant variety
- Overseeding area reduced by 24 acres with more planned

Swivel "L"

- Installed in October 2009
- Cost of $32,900
- Allows us to efficiently switch from reclaimed to potable only when needed

Fairway Turf Conversion



- Removed 24 acres of overseeded turf and replaced it with non overseeded bermuda
- Bermuda grass is much more tolerant to drought and salts
- Total cost of $375,000

Fairway Conversion cont..